Film Trailer CD

The best-selling RISC OS magazine in the world

# ACORN USER

## Exclusive Movie Previews




## Plus

- Inside RISCOS Ltd
- PD games return en masse
- The best of Acorn clip-art


tau PRESS
9 770263 745116 06>
ISSUE 208 JUNE 1999 £4.20

# CASTLE TECHNOLOGY

FOR ALL YOUR ACORN HARDWARE & PERIPHERALS

Acorn CENTRES OF TECHNOLOGY

## INTERFACES

25% off when bought with drive or scanner etc

CT's Storm SCSI interface offers unbeatable performance. Using 15MB/s SCSI components and our ultra-reliable SCSI FS, Storm's a guaranteed winner.



| | Ex VAT | Inc VAT |
|---|---|---|
| A30x0 IDE interface kit - 2.5" hard drive | £52 | £61.10 |
| A3020 fixing kit - 2.5" hard drive | £8 | £9.40 |
| A3/400 IDE interface for 2.5" & 3.5" h.d. | £60 | £70.50 |
| Storm8 SCSI2 interface - A30x0 A4000 | £88 | £103.40 |
| Storm16 SCSI2 i/f - A300/A400 A5/7000 | £96 | £112.80 |
| StormDMA32 SCSI2 i/f RPC | £128 | £150.40 |
| Storm16 SCSI2/10BaseT Ethernet i/f | £148 | £173.90 |
| Storm16 SCSI2/10BaseT&2 Ethernet i/f | £196 | £230.30 |

## HARD DRIVES (BARE)

| | | |
|---|---|---|
| 170MB A3000/A3010 interface included | £95 | £111.63 |
| 170MB A3020 fitting kit included | £59 | £69.33 |
| 170MB A300/A400 interface included | £100 | £117.50 |
| 500MB A3000/A3010 interface included | £128 | £150.40 |
| 500MB A3020 fitting kit included | £89 | £104.58 |
| 500MB A300/A400 interface included | £134 | £157.45 |
| 210MB 3.5" IDE for A4000 & A5000 | £45 | £52.88 |
| 500MB 3.5" IDE for A4000 & A5000 | £59 | £69.33 |
| 1.2GB 3.5" IDE for RiscPC & A7000/+ | £69 | £81.08 |
| 2GB 3.5" IDE for RiscPC & A7000/+ | £80 | £94.00 |
| 4GB 3.5" IDE for RiscPC & A7000/+ | £99 | £116.33 |
| 100MB 3.5" SCSI | £39 | £45.83 |
| 500MB 3.5" SCSI | £65 | £76.38 |
| 2GB 3.5" SCSI | £115 | £135.13 |
| 4GB 3.5" SCSI | £149 | £175.08 |
| 6GB 3.5" SCSI | £239 | £280.83 |

## EXTERNAL SCSI CASES

for hard drives CD drives & removeable drives
FREE headphones and data cable worth over £20

The unique Combo Case - takes any two SCSI devices & gets rid of all those cables, mains leads etc. Accepts any 5.25 unit.



| | | |
|---|---|---|
| Acorn M E U 2x CD + free 5.25" slot | £69 | £81.08 |
| Case for single SCSI device | £40 | £47.00 |
| Combo case for 2 SCSI devices | £60 | £70.50 |

## SCANNERS

inc FREE software worth £49

The new ultra-slim ScanExpress 36-bit colour scanner has a compact footprint, fast scanning speeds and quiet operation. Free ImageMaster software and TWAIN driver. Free PC interface/software kit (SCSI only). Optional transparency adaptor available.



| | | |
|---|---|---|
| ScanExpress 6000 parallel | £99 | £116.33 |
| ScanExpress 6000 SCSI | £119 | £139.83 |
| ScanExpress 12000 SCSI | £169 | £198.58 |
| Scanflat 1200 pro SCSI | £399 | £468.83 |
| ImageMaster & Twain | £49 | £57.58 |
| Scanflat transparency kit - slides etc | £149 | £175.08 |
| ScanExpress transparency kit-slides etc | £75 | £88.13 |
| CanoScan 2700F film scanner | £499 | £586.33 |

## FIXING KITS, CABLES etc

| | | |
|---|---|---|
| Podule case for A3000 | £16 | £18.80 |
| Fixing kits for hard drives | £8 | £9.40 |
| A4 IDE hard drive fixing kit | £12 | £14.10 |
| A300 series backplane (4 way 4 layer) | £48 | £56.40 |
| A7000/+ 1 slot backplane (not with CD) | £34 | £39.95 |
| Risc PC 2 slot backplane | £30 | £35.25 |
| 2nd slice for Risc PC inc 105watt PSU | £99 | £116.33 |
| 2nd slice for Risc PC | £76 | £89.30 |
| SCSI I & II cables choice from | £10 | £11.75 |
| SCSI/IDE ribbon cables from | £5 | £5.88 |
| SCSI terminator/adaptors (selection) | £10 | £11.75 |
| Monitor cable for all Acorn (selection) | £10 | £11.75 |

## XTRA HARD DRIVES

Guaranteed 4MB+/sec read transfer rate with Castle Storm DMA32 SCSI card

| | | |
|---|---|---|
| 4GB XTRA 3.5" SCSI | £179 | £210.33 |
| 8GB XTRA 3.5" SCSI | £329 | £386.58 |
| 18GB XTRA 3.5" SCSI | £599 | £703.83 |

## VIDEO HARD DRIVES

Fastest on market - externally boxed and ideal for Video use - Storm DMA32 card recommended

| | | |
|---|---|---|
| 4GB Video SCSI external | £349 | £410.08 |
| 9GB Video SCSI external | £599 | £703.83 |
| 18GB Video SCSI external | £899 | £1056.33 |

## CD ROM DRIVES

inc FREE driver software & fixing kit worth £29

Castle Technology's range of CD ROM drives are chosen for their reliability, ease of use and robustness. They have fast access times, and include driver software. They are particularly suitable for multimedia applications.



| | | |
|---|---|---|
| 4x speed SCSI CD ROM drive | £29 | £34.08 |
| 8x speed SCSI CD ROM drive | £34 | £39.95 |
| 32x speed SCSI CD ROM drive | £69 | £81.08 |
| 24x speed IDE CD ROM drive | £45 | £52.88 |
| 32x speed IDE CD ROM drive | £49 | £57.58 |
| IDE CD driver for Risc PC & A7000 | £25 | £29.38 |
| 6x4x2 CD int ReWriter inc !CDBurn | £285 | £334.88 |
| 6x4x2 Ext CD ReWriter inc !CDBurn | £335 | £393.63 |
| 16x4x4 CD int ReWriter inc !CDBurn | £349 | £410.08 |
| 16x4x4 Ext CD ReWriter inc !CDBurn | £399 | £468.83 |
| CD ROM fixing kit (data & audio cable) | £4 | £4.70 |

## CD TOWERS

7 SCSI CD towers with lockable doors

Add the Castle Technology CD Tower to your network and have simultaneous access to between 7 & 28 CD-ROMs. Enables CD resource discs to remain locked and untouched but accessible from all over the network. Up to 4 towers can be connected to one computer. Fully compatible with Access CD network software.



| | | |
|---|---|---|
| 8x CD 7 drive Tower | £379 | £445.33 |
| 32x CD 7 drive Tower | £579 | £680.33 |

## SPECIAL OFFER!

### 128K ISDN MODEMS

Join the digital revolution at lightning fast speeds! Using a Castle Technology ISDN modem (connected to an Integrated Services Digital Network pair of lines from BT), you can take advantage of fast Web browsing, fast data transfer, fast faxing, and a hi-performance phone line – all from one hi-tech box! Choose from four network/stand-alone models at great prices!

**Special offer** from £99 £116.33 inc VAT

## KEYBOARDS MICE ETC

| | | |
|---|---|---|
| Ergo keyboard for pre Risc PC | £69 | £81.08 |
| Ergo keyboard for Risc PC A7000/+ N/C | £39 | £45.83 |
| Keyboard for Risc PC A7000/+ N/C | £19 | £22.33 |
| Keyboard cable (6 way) | £10 | £11.75 |
| Mouse for all Acorns (not A7000 etc) | £12 | £14.10 |
| Mouse for A7000/+ N/C | £15 | £17.63 |
| Mouse balls heavy (pack of 10) | £15 | £17.63 |
| Floppy drive any Acorn except A300 A4 | £30 | £35.25 |
| Replacement floppy drive for A4 | £79 | £92.83 |

## REMOVABLE DRIVES

- free media with all drives

For flexible, expandable storage, the infinite capacity of a removable drive is perfect. All drives are the latest spec, and internal versions can be fitted into the CT Combo case. Data transfer rate up to 8.8MB/sec (Nomai).



| | | |
|---|---|---|
| ZIP drive internal 100MB SCSI | £99 | £116.33 |
| ZIP drive external 100MB SCSI | £99 | £116.33 |
| ZIP drive external parallel not A300 etc | £109 | £128.08 |
| Iomega Parallel ZIP driver (100MB) | £25 | £29.38 |
| MaxIT internal 500MB SCSI drive | £129 | £151.58 |
| JAZ1GB internal SCSI drive | £189 | £222.08 |
| JAZ 1GB external SCSI drive | £219 | £257.33 |
| SyJet internal 1.5GB SCSI drive | £219 | £257.33 |
| SyJet external 1.5GB SCSI drive | £255 | £299.63 |
| JAZ 2GB internal SCSI drive | £259 | £304.33 |
| JAZ 2GB external SCSI drive | £279 | £327.83 |
| PD 24x CD & 630MB optical SCSI drive | £249 | £292.58 |

## MEMORY

| | | |
|---|---|---|
| A300 & A400 1-4MB | £75 | £88.13 |
| A300 & A400 4-8MB | £119 | £139.83 |
| A3000 1-4MB | £55 | £64.63 |
| A3000 4-8MB | £149 | £175.08 |
| A3000 serial port upgrade | £25 | £29.38 |
| A3010 1-2MB | £25 | £29.38 |
| A3010 1-4MB | £59 | £69.33 |
| A3020 & A4000 2-4MB | £35 | £41.13 |
| A5000 2-4MB | £60 | £70.50 |
| A5000 4-8MB | £139 | £163.33 |
| 16MB SIMM - Risc PC A7000/+ | CALL | CALL |
| 32MB SIMM - Risc PC A7000/+ | CALL | CALL |
| 64MB SIMM - Risc PC A7000/+ | CALL | CALL |
| 128MB SIMM - Risc PC A7000/+ | CALL | CALL |
| Risc PC 2MB VRAM | £75 | £88.13 |

## NEW NEW NEW!!

**BJC 7000** – THE ULTIMATE COLOUR BUBBLE-JET PRINTER FROM CANON

This 4-colour bi-directional printer has a resolution of 1200x600dpi, and can print up to 4.5 ppm on paper up to A4+ size (so you can print right to the edge of A4) Choose from Canon's special hi-resolution papers & optional Photo Cartridge for Super PhotoReal quality prints. For sheer quality and durability, this has to be the one!



*Special price only* **£189** £222.08 inc VAT

## PROCESSORS & RISC OS

| | | |
|---|---|---|
| Risc OS 3.11 chip set | £25 | £29.38 |
| Risc OS 3.11 manual set | £20 | £23.50 |
| Risc OS 3.11 hardware upgrade - A300 | £20 | £23.50 |
| ARM 610 processor (2nd user) | £69 | £81.08 |
| ARM 3 processor for A3000 A300 A400 | £99 | £116.33 |

## MODEMS

All modems are external and come with FREE on-line time

| | | |
|---|---|---|
| 56k modem | £59 | £69.33 |
| 128k ISDN modem | £99 | £116.33 |
| 128k ISDN + 2 analogue phone ports | £109 | £128.08 |
| 128k ISDN hub router with 10BaseT | £249 | £292.58 |
| 128k ISDN modem router (managed) | £385 | £452.38 |

**DELIVERY CHARGES** - Next day insured

| | | |
|---|---|---|
| Orders over £200 paid by debit card | FREE | FREE |
| Small items | £6 | £7.05 |
| All other orders | £11 | £12.93 |
| Fitting charge (inc collection) | £18 | £21.15 |

We welcome payment by cheque (allow 5 days to clear), Credit and Debit cards.

**EDUCATIONAL ORDERS WELCOMED.**

CASTLE TECHNOLOGY, Ore Trading Estate
Woodbridge Road, Framlingham, Suffolk IP13 9LL
TEL: 01728 621222 FAX: 0800 783 9638

## COMBOS (HD & CD)

Full range available - free fitting in combo case when all purchased at the same time

| | | |
|---|---|---|
| 8x CD & 100MB HD - external SCSI | £130 | £152.75 |
| 8x CD & 500MB HD - external SCSI | £150 | £176.25 |

## REMOVABLE MEDIA

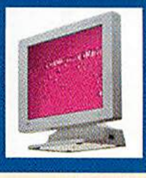
| | | |
|---|---|---|
| Zip 100MB media | £8 | £9.40 |
| Zip 100MB media (6 pack) | £45 | £52.88 |
| Syquest 105MB media | £29 | £34.08 |
| Syquest 135MB media | £21 | £24.68 |
| Syquest 230MB media | £19 | £22.33 |
| Syquest 270MB media | £32 | £37.60 |
| MaxIT 500MB media | £29 | £34.08 |
| Nomai 750MB media | £38 | £44.65 |
| JAZ 1GB media | £58 | £68.15 |
| SyJet 1.5GB media | £55 | £64.63 |
| JAZ 2GB media | £79 | £92.83 |
| PD 630MB media | £18 | £21.15 |
| CD 630MB write once media (Pk of 10) | £12 | £14.10 |
| CD 630MB re-write media | £12 | £14.10 |

## COLOUR MONITORS

3 year warranty on all monitors (1 year on AKF18)

The latest developments in TFT screen technology bring the ProLite 36 space-saving flat screens from Iiyama. The 14.1" screen has a viewable area almost 17" and a maximum resolution 1024x768. It is ecologically advanced with low power consumption and reduced eye strain. Suitable for schools or business.

**£599** £703.83 inc VAT

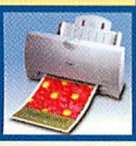


| | | |
|---|---|---|
| AKF18 14" grade B - pre RiscPC" | £79 | £92.83 |
| 14" SVGA | £89 | £104.58 |
| 15" digital SVGA | £110 | £129.25 |
| 17" digital SVGA | £200 | £235.00 |
| 15" digital SVGA Iiyama | £159 | £186.83 |
| 17" digital SVGA Pro 0.25 Iiyama | £340 | £399.50 |
| 21" digital SVGA Iiyama | £729 | £856.58 |
| 14" colour LCD display (TFT Analogue) | £599 | £703.83 |

## INKJET PRINTERS

inc FREE data cable & Acorn driver WORTH £20

Advanced inkjet technology for bright colour images & fast printing times. Up to 1200dpi resolution (virtual photographic quality). Supplied with Acorn drivers & data cables.



| | | |
|---|---|---|
| CANON BJC-250 | £84 | £98.70 |
| CANON BJC-4300 | £105 | £123.38 |
| CANON BJC-4650 | £227 | £266.73 |
| CANON BJC-7000 | £189 | £222.08 |
| EPSON Stylus colour 440 | £115 | £135.13 |
| EPSON Stylus colour 640 | £149 | £175.08 |
| EPSON Stylus colour 850 | £219 | £257.33 |
| Parallel printer cable | £10 | £11.75 |
| Turbo driver for above printers | £45 | £52.88 |
| Acorn printer driver for any listed printer | £10 | £11.75 |
| TCP/IP (LPR) postscript printer driver | £175 | £205.63 |

## SPECIALS

DOA warranty only

| | | |
|---|---|---|
| JP150 sheet feeder | £10 | £11.75 |
| Master 128 motherboard | £10 | £11.75 |
| German keyboards RiscPC/A7000 etc | £10 | £11.75 |
| A5000 Power Supply Unit | £15 | £17.63 |
| SJ Econet Bridge | £20 | £23.50 |
| Acorn Econet interface | £5 | £5.88 |
| SJ Econet starter kit | £20 | £23.50 |
| PC card for A3000 A3010 A3020 A4000 | £99 | £116.33 |
| Startwrite wordprocessor | £5 | £5.88 |

Sales lines open Monday to Friday 9.00am till 5.00pm
Saturday 9.00am till 1.00pm

Contact us by e-mail: sales@castle-technology.co.uk
Visit our web site! http://www.castle-technology.co.uk

All trademarks acknowledged.
E&OE.
All products carry a full 1 year warranty unless otherwise stated.

Acorn CENTRES OF TECHNOLOGY

**FREEFAX 0800 783 9638** **PHONE 01728 621222** **FREEFAX 0800 783 9638** **PHONE 01728 621222**

# contents

# ACORN USER

JUNE 1999

## Features



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**Editor** Steve Turnbull
**Assistant Editor** Dunstan Orchard
**Production Manager** Alan Jones
**Art Editor** Anthony Broughton

**Contributors**
Dave Acton, Ian Burley, Alasdair Bailey, Mike Buckingham, Mike Cook, Mike Cowgill, David Dade, Dave Lawrence, Steve Mumford, Jill Regan, Steve Scott, Pam Turnbull, Paul Wheatley, David Watkins, Paul Wheatley, Mike Williams

**Account Manager** John Snowden
**Ad Production** Dunstan Orchard
**Finance Manager** Charlie Moran
**Subscription Manager** Richard Siggee
**Circulation Director** Darren Whiteman
**Distribution** COMAG (01895) 444055
**Managing Director** Steve Turnbull

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## Regulars



## Next month

For those lucky enough to own Photodesk 3, Walter Briggs presents the first of his Photodesk layers tutorials; and for those who aren't so fortunate, Simon Anthony demonstrates photo-retouching using Paint and Draw.

**On sale 10th June 1999**

## Education



## Reviews



## Hands on

# CTA DIRECT

Curriculum Training Associates
Dept. AU06, 168 Elliott St.
Tyldesley
Gtr. Manchester
M29 8DS

SWITCH · DELTA · VISA · Access

See us at Acorn Wakefield Show 99 stands 3 & 4

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## 0% Interest FREE credit (6 months) or LOW cost finance on all new systems, & *FREE Internet connection*

### Finance Deals

- 0% Buy now, pay 6 months later.
- Can convert into standard finance package, no penalty (still yet 6 months intrest free)
- Low Cost Finance Option @ 1.5% per month (19.9% APR) up to 5 years to pay.
- No early settlement penalties.
- Can make additional purchases up to your credit limit without re-application.
- *** Ring For full details**

**6 months Interest Free Credit On All Systems** inc peripherals, software and 2/3 yr optional warranties

### 233Mhz SA RiscPC Offers

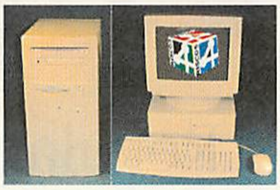


e.g. RPC SA 2M+32Mb/2.1G/ 40x CD & 17" monitor for only **£1125 + VAT or £34.00/month via L.C.F. *** RPC SA bases from **£850** inc VAT or **£22.00**/month via L.C.F. *
**AND we will match or beat your best**

### SA J233 Web Wizard

2M+32Mb/2.1G/24x CD/15" mon/ Stereo Spk, inc !Browse, Jarva and Word 6/7 compatibility. & 56K modem for only **£1145 + VAT**

### Coming soon RiscStation R7500



e.g. R7500 +16M / 4.3G / 40x CD /14" mon & Stereo Spk for only £649 exc vat (£762.58)
FREE Software Bundle
**Due in July 1999**

### A7000+ System Offers



e.g. A7000 +16M / 2.1G / 40x CD / 15" mon & Stereo Spk for only £749 exc VAT or **£23.00** / month via L.C.F.

*Please ask for other combinations*

### A7000 + Peak Performer

8M / 2.1G / 32x CD /14" mon / Stereo Spk & FREE Software Bundle for only £749 + VAT (£808 + VAT for both bundles)

### Desktop FAX MODEMS

| | | |
|---|---|---|
| 56k x2 / V90 3Com USR | £118.30 | £129.00 |
| 56k Flex/V90 (Rockwell) | £58.72 | £69.00 |
| ISDN modem (external) | £169.36 | £169.00 |
| High speed serial crds frm | £67.23 | £79.00 |

**Internet & Modem Software**

| | | |
|---|---|---|
| Ant Internet Suite | £94.05 | £110.51 |
| WebsterXL | £21.28 | £25.00 |
| !Browse CD | £33.19 | £39.00 |
| !Jarva CD | £33.19 | £39.00 |
| ArcFAX Fax software | £26.38 | £31.00 |

### MONITORS

| | Ex. VAT | Inc. VAT |
|---|---|---|
| 14" SVGA 0.28 (3yr on-site) | £89.00 | £104.58 |
| 14" SVGA 0.28 Multi-Media | £105.00 | £123.38 |
| 15" SVGA 0.28 (3yr on-site) | £110.00 | £129.25 |
| 15" SVGA 0.28 Multimedia | £129.00 | £151.57 |
| 15" Iiyama Vison Master 350 | £129.00 | £151.57 |
| **17" SVGA 0.28 (1yr RTB)** | **£159.00** | **£186.83** |
| **17" SVGA 0.28 (3yr on-site)** | **£170.00** | **£199.75** |
| **17" SVGA 0.25 (3yr on-site)** | **£275.00** | **£323.13** |
| 17" Iiyama Vison Master 702 | £235.00 | £276.13 |
| 17" Iiyama Pro 400 | £316.00 | £371.30 |
| **19" SVGA 0.26 (1yr RTB)** | **£280.00** | **£329.00** |
| **19" SVGA 0.26 (3yr on-site)** | **£360.00** | **£423.00** |
| 19" Iiyama Pro 450 | £460.00 | £540.50 |
| **21" SVGA 0.25 (3yr on-site)** | **£540.00** | **£634.50** |
| 21" Iiyama Pro Diamondtron | £665.00 | £781.38 |
| **38" SVGA (1yr on-site)** | **£1500.00** | **£1762.50** |
| **AKF18 Multisync (14")** | **£115.00** | **£135.13** |
| **AKF53 Multisync (14")** | **£165.00** | **£193.88** |
| **AKF50 Multisync (14")** | **£195.00** | **£229.13** |
| **AKF12 PAL (14" refurb) *** | **£65.00** | **£76.38** |

* 2nd user mon's available with 90 days WTY

| | | |
|---|---|---|
| Multisync A300/3000 cable | £8.50 | £9.99 |

### THE BEST! PRINTER PRICES

| ( Please ring for latest prices ) | | Ex. VAT | Inc. VAT |
|---|---|---|---|
| Canon BJC 250 colour | A4 | £84.00 | £98.70 |
| Canon BJC 2000 colour # | A4 | £100.00 | £117.50 |
| Canon BJC 2000 Scan ! # | A4 | £169.00 | £198.58 |
| Canon BJC 4650 colour # | A3 | £228.00 | £267.90 |
| Canon BJC 4650 Scan ! # | A3 | £275.00 | £323.13 |
| Canon BJC 7000 colour # | A4 | £169.00 | £198.58 |
| Epson Stylus 440 colour | A4 | £99.00 | £116.33 |
| Epson Stylus 640 Colour | A4 | £124.00 | £145.70 |
| Epson Stylus 850 Colour | A4 | £213.00 | £250.28 |
| Epson Stylus 1520 Col | A3 | £350.00 | £411.25 |
| Epson Styl Photo 700 # | A4 | £139.00 | £163.33 |
| Epson Styl Photo EX # | A3 | £290.00 | £340.75 |
| HP 420C | A4 | £74.00 | £86.95 |
| HP 695C Colour | A4 | £104.00 | £122.20 |
| HP 895CXI Colour | A4 | £200.00 | £235.00 |
| HP LASERJET 1100 | | £249.00 | £292.58 |
| HP LASERJET 2100 | | £454.00 | £533.45 |
| Photo drivers for # | | £58.72 | £69.00 |
| Scanner drivers for ! | | £29.79 | £35.00 |

*** FREE Acorn driver by request****

### Casio QV100 Digital Camera



**PC s/w only £170.00 exc vat (£199.75)**
**Acorn & PC s/w £255.00 (£299.63)**
Qv11a/Qv100 s/w kit £96 (£112.80)

### HARD DRIVES AND SUB-SYSTEMS *WHY PAY MORE???*

| A3000 /A3010 | Ex. VAT | Inc. VAT | A3020 Ex. VAT | A3020 Inc. VAT |
|---|---|---|---|---|
| 170 Mb | £ 95 | £111.63 | £55 | £64.63 |
| 340 Mb | £112 | £131.60 | £69 | £81.08 |
| 512 Mb | £127 | £149.23 | £85 | £99.88 |
| 810 Mb | £139 | £163.33 | # £119 | £139.83 |
| 1 Gb | £149 | £175.08 | # £124 | £145.70 |
| 2 Gb | £159 | £186.83 | # £134 | £158.63 |
| 3 Gb | £169 | £198.58 | # £144 | £169.20 |
| 4 Gb | £189 | £222.08 | # £164 | £192.70 |

A3000 version includes CD ROM i/f which can be used in A3020 or A4000 For external A3000 add £20.00 +VAT
\# includes partitioning software

| A4000/A5000/A400 | Ex.VAT | Inc. VAT |
|---|---|---|
| 210 refurb | £30 | £35.25 |
| 420M # | £49 | £57.58 |
| 540Mb * | £85 | £99.88 |
| 730Mb * | £93 | £109.28 |
| 1.2Gb * | £115 | £135.13 |
| 2.1Gb * | £125 | £146.88 |
| 3.2Gb * | £135 | £158.63 |
| 4.0Gb * | £145 | £170.38 |

* inc. internal removable HD & CD ROM i/f. For partitioning software only deduct £25.00 + vat (29.38)

| RPC /A7000 | Ex. VAT | Inc. VAT |
|---|---|---|
| 210 refurb | £30 | £35.25 |
| 512M | £59 | £69.33 |
| 1.2G | £70 | £82.25 |
| 2.1G | £80 | £94.00 |
| 3.2G | £85 | £99.88 |
| 4.3G | £90 | £105.75 |
| 6.4G | £100 | £117.50 |
| 8.4G | £110 | £129.25 |
| 16.8G | £198 | £232.65 |

\# limited supply



ACORN TRACKBALL & MOUSE
£29.79 + VAT

### CD-ROMS

| IDE | | | SCSI | | |
|---|---|---|---|---|---|
| 40x | £45.00 | (£52.88) | 32x | £70.00 | (£82.25) |
| 32x | £39.00 | (£45.83) | 16x | £40.00 | (£47.00) |
| 24x | £35.00 | (£41.13) | 12x | £35.00 | (£41.13) |
| 8x | £30.00 | (£35.25) | 8x | £30.00 | (£35.25) |

For EXTERNAL IDE or SCSI 1 add £50.00 + VAT (inc. cable)
(3.5 IDE driver £15 + vat) IDE int. fitting kit £5 inc.
For external SCSI II add £55.00 + Vat. (inc. cable)
Internal SCSI fitting kits from £10 + vat

### SCSI HARD DRIVES

| | | |
|---|---|---|
| 540M (#limited Stock) | £60.00 | (£70.50) |
| 1.0Gb | £70.00 | (£82.25) |
| 2Gb (7200rpm) # | £110.00 | (£129.25) |
| 4.3Gb (5400 or 7200rpm) | £140.00 | (£164.50) |
| 9.1Gb (7200rpm) | £235.00 | (£276.13) |
| 18.6Gb 7,200rpm | £425.00 | (£499.38) |

For EXT. SCSI 1 case £50.00 + VAT (inc. cable)
For EXT. SCSI 11 case £55.00 + VAT (inc. cable)

### CD-ROM WRITERS



Prices Start from £170.00 +

| | | |
|---|---|---|
| 2x2x6x ReWrt | £170.00 | (£199.75) |
| 4x4x16xReWrt | £235.00 | (£276.13) |
| **CD-BURN** | **£49.00** | **£57.58** |
| **CD-SCRIBE2** | **£49.00** | **£57.58** |



SCSI 8x
**Autochanger**
£85.00 + vat
(£99.88)

### IDE Removable Drives

| | | |
|---|---|---|
| Zip 100 IDE | £65.00 | £76.38 |
| Zip SCSI ext | £85.00 | £99.88 |
| Zip SCSI int | £85.00 | £99.88 |

IDE drives require suitable drivers/ hardware

### Parallel Removable Drives

| | | |
|---|---|---|
| Zip Parallel | £110.00 | £129.25 |
| Jaz 1G Parallel | £239.00 | £280.83 |
| Jaz 2G Parallel | £315.00 | £370.13 |

*** P'llel drives inc. Acorn Software**

### SCSI Removable Drives

| | | |
|---|---|---|
| PD650/CD | £139.00 | £163.33 |
| Nomai 750 | £165.00 | £193.88 |
| Jaz 1G int | £189.00 | £222.08 |
| Jaz 1G ext | £199.00 | £233.83 |
| Syjet 1.5Gi | £199.00 | £233.83 |
| Syjet 1.5Ge | £199.00 | £233.83 |
| Jaz 2G int | £265.00 | £311.38 |
| Jaz 2G ext | £265.00 | £311.38 |

### Removable Drive Media

| | Ex. VAT | Inc.VAT | | Ex. VAT | Inc.VAT |
|---|---|---|---|---|---|
| 100mb Zip | £8.45 | £9.93 | 1Gb Jazz | £58.00 | £68.15 |
| Zip 5 pack | £38.30 | £45.00 | 1.5Gb Syquest | £58.00 | £68.15 |
| 120mb LS120 | £7.50 | £8.81 | | | |
| 135 Syquest | £21.00 | £24.68 | CDR CD-ROM | £1.28 | £1.50 |
| 230 Syquest | £19.90 | £23.38 | CDR 10 pack | £10.00 | £11.75 |
| 270 Syquest | £29.75 | £34.96 | CDR 25 pack | £21.28 | £25.00 |
| 650Mb PD | £19.00 | £22.33 | CDR/W CDROM | £8.51 | £10.00 |
| 750Mb Nomai | £38.00 | £44.65 | CDR/W 10 pack | £70.00 | £82.25 |

### 6 Drive CD-ROM SCSI Towers

**8x £299 exc. 4x 8x £699 exc. 32x £499 exc.**

### Interface Adapters

| | | |
|---|---|---|
| Storm SCSI 8 bit (A30x0 int) | £88.00 | £103.40 |
| Storm SCSI 16 bit (podule) | £96.00 | £112.80 |
| Storm SCSI 32 bit (podule) | £128.00 | £150.40 |
| Powertec SCSI3 32 bit (Pod) | £170.00 | £199.75 |
| Simtec 8 bit (A3000/A3010) | £55.00 | £64.63 |
| Simtec 16 bit (AX00/A5000/RPC) | £45.00 | £52.88 |
| APDL (ICS)16 bit DMA | £45.00 | £52.88 |
| RapIDE32 | £119.00 | £139.83 |

Removable IDE or SCSI Housing Unit £20.00 (£23.50)

# 3 yr Warranty on ALL Acorn MEMORY why Pay More??

## ACORN MEMORY NEW PRICES

| | Ex. VAT | Inc. VAT |
|---|---|---|
| 4-8 MB Up. (A310,440,3000*) | £99 | £116.33 |
| 4-8 MB Up. (A5000*) | £119 | £139.83 |
| *rework for A3000/5000/25mhz | £25 | £29.38 |
| A3010 1-2 MB Upgrade | £25 | £29.38 |
| A3010 2-4 MB Upgrade (exch) | £45 | £52.88 |
| A3010 1-4 MB Upgrade | £55 | £64.63 |
| A3020/4000 2-4 MB Upgrade | £40 | £47.00 |
| A5000 2-4 MB Upgrade | £45 | £52.88 |
| A3000 1-2 MB Non-Upgrade | £20 | £23.50 |
| A3000 2-4 upgrade (exchange) | £45 | £52.88 |
| A3000 1-4 MB Upgrade | £55 | £64.63 |
| A3000 Serial Port Upgrade | £23 | £27.03 |
| A310 4Mb Upgrade | £50 | £58.75 |
| A400/1 1Mb Upgrade per meg | £25 | £29.38 |
| Risc OS Carrier Board (A310) | £19 | £22.33 |
| MEMC 1A upg (short supply) | £45 | £52.88 |
| **NEW** A540 4Mb | £97 | £113.98 |

## RISC PC MEMORY

| Also FOR A7000 | Ex. VAT | Inc. VAT |
|---|---|---|
| 8Mb SIMM | £11.00 | £12.92 |
| 16Mb SIMM | £22.00 | £25.85 |
| 32Mb SIMM | £48.00 | £56.40 |
| 32Mb High Clearance | £53.00 | £62.28 |
| 64Mb SIMM | £85.00 | £99.88 |
| 128Mb SIMM | £170.00 | £199.75 |
| 1Mb VRAM | £38.30 | £45.00 |
| 2Mb VRAM | £76.00 | £89.30 |
| 1-2 Mb (exchange) | £66.00 | £77.55 |

*Please ring for latest prices*

## 33 Mhz Arm 3 upgrade

| | |
|---|---|
| **with FPA socket** | **£115.00 inc** |
| **with FPA 10 fitted(25Mhz)** | **£165.00 inc** |

## RiscOS 3.11 Rom upgrades

**£25.00 exc Vat (£29.38)**

# NETWORKING

## ETHERNET INTERFACES

| | Ex. VAT | Inc. VAT |
|---|---|---|
| A3000 int 10base2 or T , Access+ | £89.00 | £104.58 |
| A400 / A5000 10base2 or T Acc+ | £89.00 | £104.58 |
| A400 / A5000 10base2 & T Acc+ | £99.00 | £116.33 |
| A3020 10base2 Access+/ext MAU | £99.00 | £116.33 |
| A3020 10baseT Access+/ext MAU | £99.00 | £116.33 |
| RiscPC/A7000 10base2 or T Acc+ | £89.00 | £104.58 |
| RiscPC/A7000 10base2 & T Acc+ | £99.00 | £116.33 |
| Ant Access+ ROM upgrade | £10.00 | £11.75 |

## Cables

| | | |
|---|---|---|
| 2M | £4 | £5.29 |
| 3M | £6 | £7.05 |
| 5M | £7 | £8.23 |
| 10M | £11 | £12.93 |
| 20M | £15 | £17.63 |

State 10base2 or 10baseT

any size made to order

## Network Hubs

| | exc Vat | inc Vat |
|---|---|---|
| 10bT 16+2(18) port | £75.00 | (£88.13) |
| 100/10 Auto 16 port | £249.00 | (£29.58) |

**We supply and / or install all network components please ring for your requirements**

## RiscOS 4 £99.00 +vat

**(£116.33) place your order now**

**Fitting & data transfer, if required, £25 inc vat (£15 with new HD).**

## MICE & KEYBOARDS



High Quality *Acorn* ERGO Mouse £12.00 (£14.10)

| | Ex. VAT | Inc. VAT |
|---|---|---|
| Acorn Trackball/Mouse ***NEW*** | **£29.79** | **£35.00** |
| Acorn Original Mouse | £25.00 | £29.38 |
| Acorn **ERGO** Mouse ***NEW*** | £12.00 | £14.10 |
| **A7000 replacem't Mouse *NEW*** | **£12.00** | **£14.10** |
| **Ergo (std) RiscPC Keyboard** | **£21.28** | **£25.00** |
| **Ergo curved RiscPC K/board** | **£29.79** | **£35.00** |
| A400/A5000 replacement k/brd | £59.00 | £69.33 |
| A400/A5000 Ergo keybroard | £69.00 | £81.08 |

## COLOUR SCSI SCANNERS

*All scanners inc. Acorn SW*



| | | |
|---|---|---|
| P'llel Mustek 600dpi | £99.00 | (£116.33) |
| Mustek A4 600 dpi | £119.00 | (£139.83) |
| Mustek A4 1200 dpi | £149.00 | (£175.08) |
| Epson GT7000 | £199.00 | (£233.83) |
| Epson GT7000P | £249.00 | (£292.58) |

*Imagemaster & Twain available separately*

## Replacement Floppys Drives

A3000/400/500 £29.00+vat (£34.08)

A30X0/4000/5000 floppy allows cross -formatting of HD and DD discs £29.00+vat (£34.08)

## POWERED SPEAKERS

| | Ex. VAT | Inc. VAT |
|---|---|---|
| 60 watts with PSU | £16.98 | £19.95 |
| 240 watts with PSU | £24.68 | £29.00 |
| Subwoofer system | £42.00 | £49.35 |

## Character Mouse Mats

| | |
|---|---|
| Southpark Kenny | £5.99 |
| Southpark Cartman | £5.99 |
| Disney Mickey, Pooh, Donald etc. | £5.99 |
| X-files (four types) | £5.99 |
| Garfield or novelty | £4.99 |
| Std. mat £1.00 / Econ. 0.65p | |

## Switch Boxes

| | | |
|---|---|---|
| 2-1 with cable | £15.00 | £17.63 |
| 2-1 Auto with cable | £15.00 | £17.63 |
| 4-1 with cable | £19.00 | £22.33 |
| 2-1 Monitor / K'board | £29.79 | £35.00 |

## R-Comp CD-ROM Software

| | |
|---|---|
| **ABUSE** | **£22.00** |
| **Descent** | **£27.00** |
| **DOOM+ Trilogy (£32.50 with book)** | **£30.00** |
| **Heroes of Might and Magic 2** | **£32.00** |
| **Quake (due soon)** | **£33.00** |
| **Syndicate +** | **£26.00** |
| **Towers of Darkness (Hexen triple)** | **£30.00** |

## Consumables

***Premier Quality Ink Refills***

| | | |
|---|---|---|
| ***Single refills*** | ***(1x22ml)*** | ***£6.00 inc*** |
| ***Twin refills*** | ***(2x22ml)*** | ***£10.00 inc*** |
| ***Triple refills*** | ***(3x22ml)*** | ***£14.00 inc*** |
| ***Tri- Colour*** | ***(C,M,Y)*** | ***£15.00 inc*** |
| ***Quad-Colour*** | ***(C,M,Y,K)*** | ***£20.00 inc*** |
| ***125 ml*** | | ***£21.00 inc*** |
| ***250ml*** | | ***£38.00 inc*** |
| ***500ml*** | | ***£50.00 inc*** |
| ***1 litre*** | | ***£70.00 inc*** |

*All sizes available in C,M,Y,K*

## FLOPPY DISKS @20p !!

| | Ex. VAT | Inc.VAT |
|---|---|---|
| DD Re-label Acorn fmt 10 | £2.00 | £2.35 |
| DD Re-label Acorn fmt 100 | £17.02 | £20.00 |
| HD bulk Acorn or PC 10 | £2.00 | £2.35 |
| HD bulk Acorn or PC 100 | £17.02 | £20.00 |
| HD Branded 10 pack | £3.50 | £4.11 |
| 20 cap Disk Box | £1.69 | £2.00 |
| 40 cap Disk Box | £2.54 | £2.98 |
| 100 cap Disk Box | £2.98 | £3.50 |
| 3.5" Floppy head cleaners | £2.50 | £2.94 |
| CD-ROM cleaner | £4.25 | £4.99 |

## Printer Ribbons, Inkjet Cartridges, New/Recycled Laser Toner Carts

**Prices available on request**

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**Acorn networking for PCs**

**£29.95 exc Vat £35.19 inc Vat**

**see network section for Cards etc.**

## StrongARM Special Offer

£259.00 inc VAT

(with any Hard Drive / Memory purchase)

## RiscPC PC Cards

| | |
|---|---|
| DX2-66 | £145.00 inc VAT |
| DX4-100 | £195.00 inc VAT |
| 586-100 (Acorn) | £290.00 inc VAT |
| 586-133 (CJE 512) | £300.00 inc VAT |

**We can repair/upgrade your machine(s) and monitors at competitive prices please ask**

All Acorn's , BBCs & PCs

## NEW STAFF

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# (All Prices below include VAT) THE BARGAIN BASEMENT

## Acorn Software Bin

| | |
|---|---|
| A3010 Joystick Controller Software | £15.00 |
| Acorn Pocket Book..Schedule | £10.00 |
| Alone in the Dark | £29.00 |
| Arm Tech Labeller | £9.00 |
| Arm Tech ClipArt (various per pack) | £8.00 |
| Birds of War | £20.00 |
| Boxing Manager | £8.00 |
| ColourSep (Colour Separation Software) | £8.00 |
| Creator 2 | £25.00 |
| D'File Font Pack (Academy) | £10.00 |
| D'File Font Pack (Balmoral) | £10.00 |
| D'File Font Pack (FreeStyle Script) | £10.00 |
| D'File Font Pack (Manhattan) | £10.00 |
| D'File Font Pack (Mastercard) | £10.00 |
| D'File Font Pack (Old Towne 536) | £12.00 |
| Diary + | £9.00 |
| Drifter | £30.00 |
| FIRE and ICE | £15.00 |
| Frak (for RPC) | £13.00 |
| Galactic Dan | £10.00 |
| Game ON (for RPC) | £15.00 |
| Global Effect | £25.00 |
| Guile | £10.00 |
| HERO QUEST | £15.00 |
| Imagery Art Package | £25.00 |
| Jahangir Khan Squash | £8.00 |
| KV ( Platform Game) | £8.00 |
| My World Support Disc Ancient Egypt | £12.00 |
| My World Support Disc Ancient Greece | £13.00 |
| Nuclides II and Elements II (save £5.00) | £25.00 |
| Quest for GOLD | £5.00 |
| Revelation 2 | £29.00 |
| SilverBall | £9.99 |
| StrongGuard | £25.00 |
| TURBO DRIVER - Epson Stylus | £45.00 |
| Visual Backup | £15.00 |
| Wavelenth | £12.00 |
| World Class Leaderboard (GOLF) | £10.00 |
| Zool (on HD) | £10.00 |

## Acorn CD-ROM Software

| | |
|---|---|
| Crystal Maze | £15.00 |
| D'File PDCD 3 or 4 | £5.00 |
| D'File PDCD 5 | £10.00 |
| Hutchinson Encyclopedia | £39.00 |
| Robert Duncan Cartoon KIT | £39.00 |
| **TopicArt CD** | **£5.00** |
| **Tots TV ABC** | **£15.00** |
| YITM Electricity and magnetism | £15.00 |
| YITM Elements | £15.00 |
| YITM Materials | £15.00 |
| **YITM (all three titles)** | **£35.00** |

## CD General Resource Titles

| | |
|---|---|
| 35,000 Clip Art (WMF) | £20.00 |
| 50,000 Clipart | £15.00 |
| 75,000 Clip Art (WMF)& images | £25.00 |
| Internet Clipart (new) | £15.00 |
| COREL ARTSHOW 5 | £29.00 |

## *Werewolf* Software

| | | |
|---|---|---|
| Shuggy | was £25.95 | now £14.95 |
| T.A.N.K.S. | was £25.95 | £16.95 |
| RAMplify | was £19.95 | £17.95 |
| ChildPlay ( desktop) | | £14.95 |

## 1/2 price (or less) Book Bargains

| | |
|---|---|
| Dabhand Guide "Budget DTP" | £3.00 |
| Dabhand Guide "C" ver 3 | £8.50 |
| Dabhand Guide "C" ver 2 | £3.00 |
| Dabhand "Graphics on the ARM | £7.50 |
| Dabhand Guide "Impression" | £7.50 |
| Internet info server | £20.00 |
| SQL | £17.50 |

## Various Hardware bargains

| | | |
|---|---|---|
| A3000 2Mb bases from | £65 | £76.38* |
| A3010 2Mb bases from | £85 | £99.88* |
| A3020 2Mb bases from | £125 | £146.88* |
| A4000 2Mb bases from | £150 | £176.25* |
| A5000 4Mb bases from | £250 | £293.75* |
| A4 Portables (6 months wty) | £600 | £705.00 |
| RPC bases from | £468 | £549.90* |
| SVGA Monitors Various from | £45 | £52.88* |
| Pioneer SCSI 4x 6x stack | £139 | £163.33 |

new items 12 months wty *2nd user 90 days wty

We have a large collection of Budget PC software suitable for RPC Pc Emulators and PC clones inc, Education, Home, games an utilities please ring for list

## Alternative PC Bases

**i.e. Siemans Nixorf Pentium 200 MMX from ONLY £249.00 + ring for latest prices.**

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CREDIT CARD / SWITCH please give name, address, tel. no, card no, expiry date, issue no.

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Small items (under 2Kg).....no more than £6 + vat

One box of items totalling upto 25kg...£6.50 + vat

Computer systems.................................£13 + vat

All prices are correct going to press. E&OE

All goods are fullyguaranteed but not supplied on approval

# Artistic Licence

Acorn Computer Group PLC has transferred its 24.42% stake in ARM Holdings PLC to its Applied Risc Technologies Ltd subsidiary. ART was originally the Acorn Group company which was set up to generate consultancy and 3rd party design work after the Online Media division was closed.

Acorn's ARM holding, which is worth around £200 million on paper, has been transferred in ordered to tidy up the Acorn Group's balance sheet. Element 14, the re-named Acorn Computers Limited company, is now the focus of most of Acorn's activity in the bid to become established as an innovative supplier of digital TV technology. ART is still serving old customers, but E14 is Acorn's real future.

Speculation that Acorn was, after all, going to sell its ARM holding, sent both Acorn's and ARM's shares markedly higher. However, unless Acorn's accountants have discovered a crafty way of minimising the massive tax burden posed by disposing the holding, you shouldn't hold your breath.

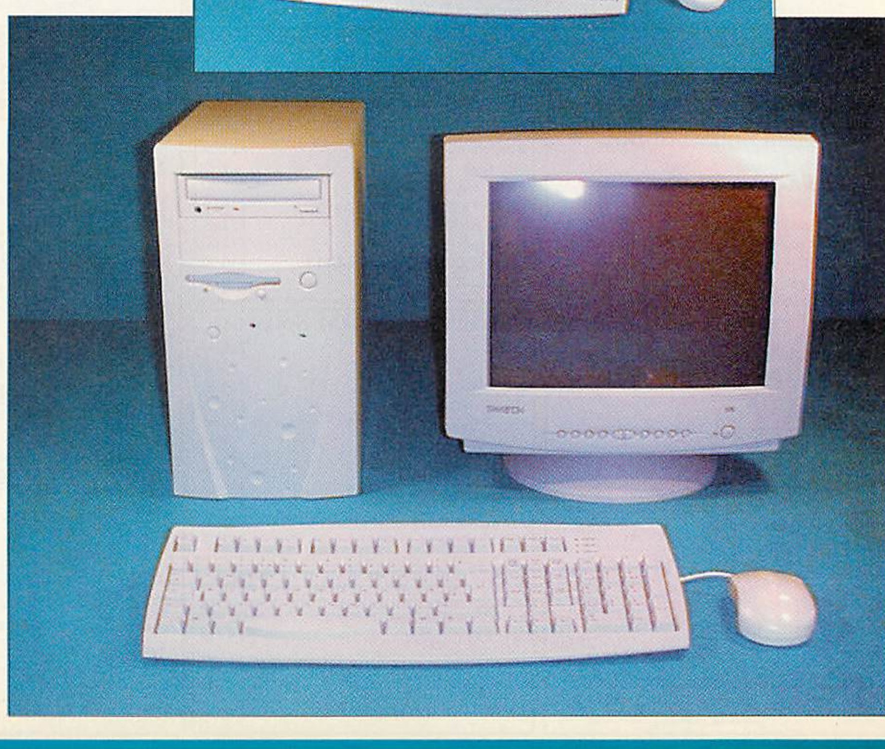
# Another new RISC OS hardware venture

Since last month's news that the future of RISC OS is assured, along with its availability to third party licensees, the list of manufacturers developing RISC OS-based computers has grown.

Besides CTL, which is manufacturing selected lines from Acorn's old product range, Millipede Electronic Graphics, which is developing a new high performance motherboard to fit the Risc PC, and the Interconnex 'Peanut' notebook, last month we reported news from Germany about the planned Galileo family of RISC OS computers.

This month we can add RiscStation Ltd, which is a new company created from the Acorn dealer, CTA Direct. RiscStation's first product, the RiscStation 7500, appears to be a more flexible and feature-enhanced alternative to the original Acorn A7000+. It has the same ARM7500FE integrated chip-set, but is clocked slightly faster at 56MHz. Instead of the A7000's compact proprietary case, the RiscStation is to be offered with a standard PC-style desktop or mini-tower case, and the RiscStation 7500 motherboard conforms to the micro ATX installation standard.





Compared to the A7000+, the RiscStation is supplied with more RAM as standard (16Mb compared with 8Mb) and a larger harddisc (4.3Gb compared with 2Gb). It also has a 40X CD-ROM drive. RiscStation also mentions 'ISA-style' expansion ports in its specification sheet, optional infra-red communications and an optional USB (universal serial bus) interface. There is even mention of an AppleTalk port, built in SCSI and 56K modems.

Preliminary prices are: £575 for the base unit; £649 with a 14in monitor; £675 with a 15in monitor; and £749 with a 17in monitor. All come with a software bundle, and all prices are exclusive of VAT.

We only received details of RiscStation's plans just prior to going to press, so our information is fairly sketchy. We are promised that final product will be shipped not long after the Wakefield Show. The good news is that CTA Direct and RiscStations Ltd will be exhibiting at the Wakefield Show (15-16th May) and we'll all have an opportunity to find out more about their plans then.

The contact person at CTA Direct and RiscStations Ltd is Roy Heslop, e-mail: roy@cta.u-net.com, tel: 01942 797777.

# StrongARM in a pen

With the FreePen covered elsewhere in the News this month, the pen theme continues with news of a StrongARM processor powering another Scandinavian pen-device, the C Pen, from the Swedish company C Technologies AB. The C Pen was officially launched into the European market at the recent CeBIT show in Hanover, Germany.

Actually, describing the C Pen as a 'pen' is stretching the definition somewhat – it doesn't write and it's practically as big as a small mobile phone, but it is held and operated in the hand like a pen. The C Pen is actually a compact image scanner which can scan graphics and text, converting the latter to text files using OCR. It incorporates a four line LCD screen and communicates with a host computer via infra-red.

8Mb of flash memory is built in and there are no moving parts – even for the optical scanner head in the tip of the pen. The StrongARM is clocked at 100MHz and the whole device weighs just 100 grams. More information on the C Pen is available from C Technologies Web site at http://www.ctech.ideon.se

# A pen-shaped challenge to the humble mouse

Take a computer mouse, shrink its ball – if you'll pardon the expression, cut off its tail and stretch it into a pen shape and you have the gist of the new FreePen cordless computer pointer. The Danish design, from Kanitech A/S, is a neat cigar-shaped and sized device which can be used in much the same way as a stylus and a digitiser pad, except there is no pad and, unlike some pad-based systems, there is no wire connecting the device to the computer.

Communication between the pen and the computer is via a radio receiver which plugs into either the serial port or a standard PS/2-style mouse port. In theory, any Acorn which can use a PS/2 mouse should be able to work with the FreePen. Three buttons on the 'pen' represent usual mouse button functions and you can also 'click' the mouse by tapping the ball-tip of the pen.

The FreePen should start shipping this summer, though as-yet we don't know the price. For more about the FreePen, check out: http://www.freepen.com. Alas, the last time we looked – it was still all in Danish, but at least there are some nice pictures of the product.

# RISC OS programmers sought

Oregan Networks Ltd have several full-time job vacancies for experienced RISC OS software engineers. The positions will involve working on-site at the Oregan Networks offices in Leicestershire. Oregan say the work centres around 'a number of exciting Set Top Box related projects'.

Applicants need the following skills: proficiency in C and the Acorn or ARMTools compilers, an ability to integrate optimised ARM code where required, experience of developing RISC OS based WIMP applications, and an understanding of Web based and Internet technologies.

Contact Oregan Networks Ltd at tel: 01530 56 33 11, Web: http://www.oregan.net

# When is a DVD-ROM drive more than a DVD-ROM drive?

Answer: when it supports DVD-RAM read-capability. A not so well-known fact is that most DVD-ROM drives which have been sold to date are unable to read DVD-RAM (write/erasable) discs. DVD-ROM drives, which look set to replace CD-ROM drives in the next year or so, are now in plentiful supply, and many PC makers are fitting them as standard already.




DVD-RAM, the official standard for re-writeable DVD, has been available in the form of Panasonic and Hitachi drives since last Autumn. DVD-RAM discs can store as much as 9.4Gb of data on a double-sided disc. The discs inside DVD-RAM caddies, which are the same physical size as a compact disc, can be removed and placed into the conventional 'bare' tray of a DVD-ROM drive, but the disc encoding is not compatible with first generation DVD-ROM drives.

Panasonic, which has been pushing DVD-RAM vigorously, is one of the first manufacturers to ship a DVD-ROM drive which can read DVD-RAM discs. The Panasonic SR-8583, which has a suggested price of £89.99+VAT, is a 5X mechanism, equivalent to 32X when reading CD-ROMs. It's also backwards compatible with most popular CD formats, including CD-R and CD-RW.

The message is simple, when the time comes to choosing a DVD-ROM drive – check to make sure it's DVD-RAM compatible. Panasonic, tel: 0800 444 220.

# Really free Internet

A couple of months ago, we brought news of ClaraCall, an Internet service which was cheaper than so-called 'free' services like Dixons FreeServe. ClaraCall can save money on the dial-up costs of surfing the Net, but a new service called 'screaming.net' actually offers no-cost dial-up to their free Internet service during off-peak hours – after 6pm weekdays and throughout the weekend. Even during peak hours, after 8am in the morning weekdays, you're guaranteed a 10 percent reduction in the dial up cost.

So, what's the catch? Localtel, the company behind screaming.net would argue that there isn't a catch, and from what we've been told, it looks pretty kosher. First of all, you need to have an ordinary domestic BT phone line, so cable and, we guess, Hull Telecom, customers can move on to the next news story at this point. ISDN and Home Highway customers are being promised the service later in the year.

What you have to do in order to access the free screaming.net Internet service is sign up to Localtel's phone service. This isn't as worrying as it sounds as there is no physical change to your phone line and it will continue to be maintained by BT. What does happen is that billing and customer support services are taken over by Localtel.

However, all calls, except those to mobile phones, are discounted by ten percent compared to BT and the company promises to maintain BT's Friends and Family-style discounts, 1471 and call waiting options.

For more information, check http://www.screaming.net or visit your local Tempo electrical store, where you will be able to collect a free Microsoft *Windows* screaming.net CD-ROM. The CD will both register you with Localtel and the screaming.net Internet service.

So you will need *Windows* compatibility at first, but once your Internet parameters have been established, it ought to be possible to migrate them to your favoured RISC OS Internet suite.

# ISDN with extended features




Modems can do practically anything these days – they can connect you to the Internet, send and receive faxes, take voice messages and some can take messages even when your computer is switched off. But manufacturers of ISDN terminal adapters (TAs), the all-digital equivalent of a modem, have been far less adventurous with their designs. Now, however, with BT's introduction of more affordable Highway ISDN-compatible services, ISDN TAs are getting a makeover.

The new Pace ISDN Professional TA comes from the same company which produced the Solo modem, which even announces an incoming caller's phone number to you. The Pace ISDN Pro isn't quite as clever as the solo, but it is the first ISDN TA we know of which incorporates fax, voice messaging and calling line identification (CLI). The latter feature means you can plug in a standard CLI box or phone which will then display the number of an incoming caller.

RISC OS software from suppliers like David Pilling has been adapted to work on various popular voice modems, so it shouldn't be difficult to produce voice and fax support for the ISDN Pro. The price is £199 including VAT. For more information, contact PMC Electronics Ltd, tel: 0990 561001, Web: http://www.pacecom.co.uk, e-mail: sales@pacecom.co.uk

# Ex-pat Acorns

We've been contacted by Dr. Andy Cartlidge in Florida, who writes: 'Yes, there are a few Acorn users here in the USA'. Andy operates a specialist business with his father, who lives in Stoke-on Trent, creating art work for bone china tankards bearing the military insignia of various regiments in the British military forces.

Their main customer is the British military, so accuracy and quality is paramount. Even in far away Florida, *ArtWorks* and Acorns are the tools of choice for the job. Andy explains: 'Essentially, as old regiments are being disbanded, or amalgamated and 'rationalised', we are commissioned to draw the Regimental badges – sometimes from ancient woodcuts. 'On numerous occasions we've ended up making the definitive artwork for the regiment, as the old stuff was in error! We then have them transferred to bone-china tankards, among other things – cups, mugs and trinket boxes are quite popular'.

Andy's father started the business using associates who produced the art work by hand, but the quality wasn't good enough. It was then, a few years back, that the Florida-based Acorns came to the rescue, according to Andy: 'At the time my wife was not working, so we volunteered the use of her time, our A310 and *ArtWorks*. We've now progressed though an A5000 and are currently using 2 SA Risc PCs. Typically, my father gets the orders, finds the (sometimes almost illegible) artwork copy, and mails it to us.

'We draw it from scratch (scans are useful for comparison), send a completed drawing back to the UK where its checked, and then we perform spot-colour separation. The separations go to a transfer-maker, they're then transferred to the china tankards, the tankard is fired and we sell it. Easy, really!'

Naturally, it's not that easy after all — especially authenticating various details in the original designs. But the trans-Atlantic teamwork has paid off, and 50 regiments later, the business is doing very well. If you'd like to find out more about British Militaria, e-mail: andycart@worldnet.att.net

# Icon Technology

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$$A = \frac{1}{n}\left\{\sum_{k=1}^{n} Z_k - B\sum_{k=1}^{n} x_k\right\}$$

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### Offer prices

| Product | Normal price | Offer price | Including VAT and P&P |
|---|---|---|---|
| EasiWriter professional | £129.00 | £96.00 | £116.32 |
| TechWriter professional | £199.00 | £149.00 | £178.59 |

Great deals for students - check our Web site, email or ring for details.

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**Now reads Impression**

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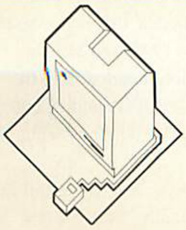
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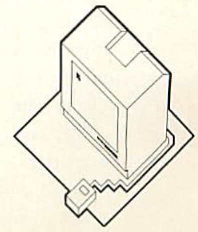
## Icon Technology Limited

Church House • Carlby • Stamford • Lincs • PE9 4NB

Phone and Fax 01778 590563

**http://www.icontechnology.net**

email: sales@IconTechnology.net



# PhotoReal drivers

Dorset-based Spacetech has upgraded its PhotoReal and plain paper drivers for BJC 7000-series colour ink-jet printers. A separate extended printer control application has been added to provide more choices regarding quality vs. printing speed. This application also provides the necessary tools for maintaining the printer.

The extended printer control application also allows you to choose between colour or black & white printing and provides a choice of two types of reproduction; graphic or photographic. This last choice refers to two alternative ink sets, calibrated for printing the two different image types. For example, this allows the photo cartridge to be used when printing text or line-art material, or can be used to improve the appearance of photographs printed with the ordinary colour cartridge.

Support for automatic and manual (flat path) media feed has been added, as well as support for a wide range of media type, including plain paper, coated paper, transparency, back print film, fabric sheet, glossy paper, high gloss film, high resolution paper, envelope, postcard and full-bleed paper.

The speed and grade of printing may be defined through 5 steps from draft (ink saving) to fine (slow). Smoothing may also be enabled or disabled. Existing users will receive a free upgrade. Spacetech are at: http://www.spacetech.co.uk, tel:: 01305 822753



# DIY meteorological station gets Y2K update

Weather Reporter, the weather data logging station, which is a popular and familiar resource in many schools around the country, has had an upgrade to ensure it is Year 2000 compliant. The hardware measures most aspects of the weather, including wind speed, direction, temperature, sunshine, daylight, rainfall and, optionally, pressure and humidity.

Data is stored in the Weather Reporter unit and for a maximum interval of 60 hours. Within that time, teachers or students connect the host computer to download the data which can then be analysed using a spreadsheet or a database, using standard file formats, like CSV files.

The basic outfit is priced £395 + VAT. The pressure and humidity recording module is priced £150 + VAT as an option. The complete package, including extra software is priced £550 + VAT. The Weather Reporter is supplied by the Advisory Unit, Computers in Education, tel: 01707 266 714, email: sales@advisory-unit.org.uk

# i-cubed cards return

Although i-cubed officially quit the Acorn market a few months ago, it's popular range of Ethernet cards has been given a new lease of life by Design IT in South Staffordshire. i-cubed EtherLan Ethernet cards will, subject to the availability of components, continue to be manufactured by the same electronic production company i-cubed have used for many years, so the products should remain virtually identical.

Design IT takes over the customer support for new and existing users of i-cubed cards. However, Design IT concede that their level of support won't be as comprehensive as originally offered by i-cubed. From 1st May, Design IT take responsibility for handling all enquiries, except those which relate to certain returns and repairs of their older cards.

Curiously, Design IT has included a disclaimer that they have no plans to provide additional support for the use of EtherLan cards on versions of RISC OS later than 3.7. RISC OS 4 could be with us by the time you read this story, though nobody expects there to be problems in any case. Design IT, tel: 01902 894775, fax: 01902 894775, e-mail: sales@dezignit.demon.co.uk, Web: http://www.dezignit.demon.co.uk



# Friends of Fortran

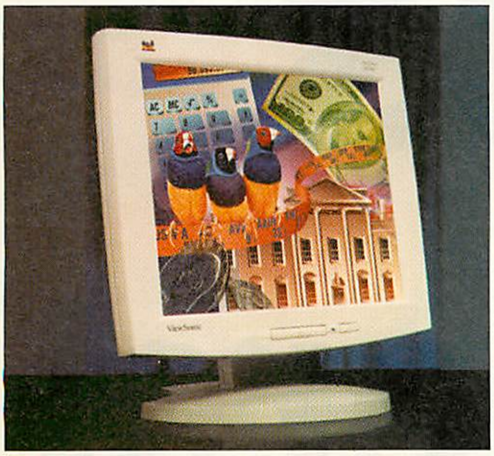
Fortran, if you didn't already know, is a relatively old programming language which used to be very popular with mathematicians and physicists for performing complex calculations. It was also the language out of which Basic was spawned. Fortran is a language which you either love or hate.

Personally, I'm of the latter opinion, but Fortran still has many supporters – even in the Acorn world. Fortran Friends is one such example, and they have just announced an improvement to their Web site at http://www.argonet.co.uk/users/fortran/

Fortran Friends run a self-help group for Fortran programmers on RISC OS machines and write complete applications for mathematical and scientific problems. Demos of their popular 'polyhedra' display programs *PolyDraw*, *PolyNet* (reviewed in *Acorn User* in June 1998) and *Stellate* (reviewed in *Acorn User* September 1998) can be downloaded from the Web site, as can the shareware *LazyPrint* which uses HPGL and PCL to print text and drawfiles quickly to any Hewlett-Packard printer without using *!Printers*.

The Fortran utility libraries enabling Fortran programmers to call RISC OS system functions are also available for downloading from the site. To contact Fortran Friends, e-mail: fortran@argonet.co.uk

# Flat, large and beautiful



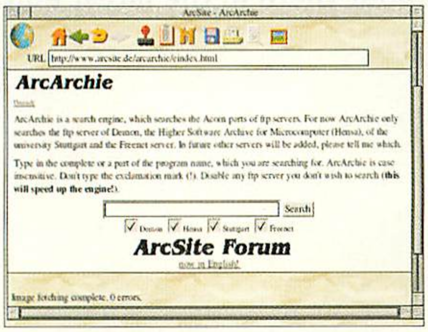
Size is everything when it comes to computer monitors. Viewsonic's latest state-of-the-art LCD monitor has an 18.1in visible diagonal measurement, which makes it equivalent to a 21in conventional monitor. The VPD180 ViewPanel monitor has a 140 degree viewing angle, 1280x1024 pixel resolution, 16.7 million colour display capability and only consumes 45 watts of power.

It also supports the emerging all-digital MDR standard for connecting to next-generation display controllers, which means there is no analogue degradation of the picture quality. Size may be everything, but so is the price, and at £2,595 + VAT, the VPD180 remains an expensive luxury. But we're getting there!

# RISC OS devotion

ArcSite is an Internet Web site devoted to all things Acorn/RISC OS. The new site, which is based in Germany, could be described as a mini Internet portal specialising in Acorn-related information. On offer are free homepages, a Web based discussion area, more than 700 Internet links, and a search engine called ArcArchie.

Carlos Michael Santillan is the person behind all this – so check out ArcSite at http://www.arcsite.de/eindex.html [I've been using this to search the ftp servers for a while now, and it's very useful – Ed].




# A NotePad for your Series 5

Purple Software, the Psion software specialists, have released *NotePad* – which is described as an intelligent note taker for integrating information on the Psion Series 5. *NotePad* can link notes to word processor files, spreadsheets, databases, voice notes and even Web addresses.

Purple suggest you can use *NotePad* as a contact manager by linking notes to contacts in their PowerBase database application, or even the basic database built into the Series 5. A key attraction of *NotePad* promises to be its search function – a feature missing from the basic Series 5. *Notepads* can be created and linked in a hierarchical order, making them useful for keeping track of projects using dates and alarms too. *NotePad* was originally developed by Pelican Software and earlier versions have proven popular in the US.

Purple are marketing Version 3 in the UK and the rest of Europe. Purple Software, tel: 0171 387 7777, Web: http://www.purplesoft.com

# Acorn training in your sights?

Cambridge training company, Insight Training, is offering a pair of two-day training courses in June and July aimed at anyone wanting to become proficient at Acorn software, hardware, systems maintenance and upgrading. Course dates include 7-8th June and 5-6th July. For more information, contact Insight at tel: 01223 812927. Their Web site is at http://www.argonet.co.uk/business/insight/ or e-mail insight@argonet.co.uk

## In brief

### New DrawWorks for Wakefield

iSV is aiming to release a new version of its popular DrawWorks package at this year's Wakefield show, which takes place on 15th-16th May – a few days after this issue of Acorn User comes out. Aaron Timbrell of iSV was keeping his cards close to his chest prior to the show: 'I cannot go into to much detail at this stage as some features have not been finalised, however I don't think it would be unreasonable to describe it as a £200 package for well under £100.'

That sounds like a shot across the bows of Cerilica, who will also be officially launching their ambitious Vantage drawing package at Wakefield. Aaron can be contacted via e-mail: atimbrell@aol.com

### Newsgroups for kids

Richard Stevenson, Head of Tech and ICT at Ballard School in Hampshire, has announced the setting up of 2 Internet newsgroups specially for children aged 7-11 and 11-14. The newsgroups are moderated using Risc PCs. For more information, contact Richard via e-mail at: rs@ballard.hants.sch.uk

### Ink-jet cartridges for charity

BIBIC, the British Institute for Brain Injured Children, has extended its appeal for the collection of spent ink-jet printer cartridges. BIBIC is expanding its ink-jet recycling project which has been running successfully for the last year. Now, BIBIC is distributing plastic bulk collection bags for offices and other organizations where several ink-jet printers are used.

The bags can be hung on a wall and filled conveniently over time with spent cartridges. There is also a separate scheme for re-cycling laser printer cartridges. If you would like to participate in the scheme, call Erica on 01278 684060.

### Last minute news

Just a quick mention of Microdigital's new machine, also set to be launched at Wakefield. The machine, targeted at home and school users, should come complete with an ARM7500FE, 16Mb RAM (expandable to 256Mb) and – if a licence is secured – RISC OS 4 in 5Mb of flash memory.

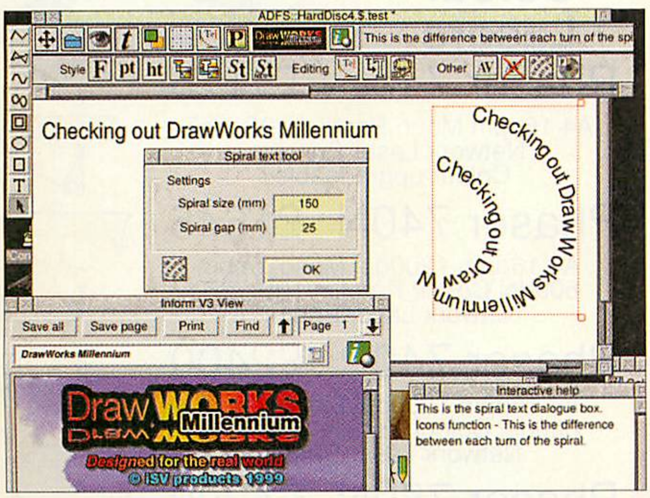
They have also catered for those users who wish to add to their machine; two USB ports, two serial ports, a parallel printer port, a MIDI port, audio in, 16-bit audio out and a microphone socket are all provided.

Look out for more information in the Wakefield round-up in July's issue

# DrawWorks Millennium

We were expecting only one major graphics release at the Wakefield show this year, however iSV are doubling the fun with the launch of a vastly updated *DrawWorks Designer* – renamed *DrawWorks Millennium*. *DrawWorks Designer* was certainly in the old-school mould of a 'vector package' but producers iSV are now calling the latest incarnation a full on 'design package', theoretically pitting their software against *Vantage*. There's no doubt that both packages overlap, although iSV are targeting the home user who perhaps doesn't require some of the more complex print features of *Vantage*. For us, the users, this is great news. Competition in this fast growing area can only fuel the development process.

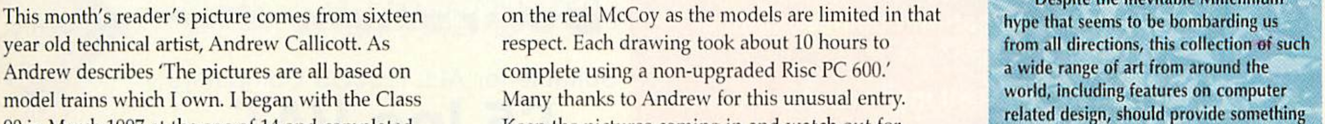
For Cerilica and iSV it may be a little more tricky. While many home users might possibly be looking for something simpler in feature range than *Vantage*, there's always a big portion of the traditional Acorn market who want every possible technical and professional feature at their finger tips. And on top of that, *Vantage* has been designed very carefully with an intuitive and easy to use interface; it's certainly no monster for novice users.




These new releases which both rely heavily on *Draw*, albeit in different ways, are at least partially in competition, and it's going to be very interesting to chart their progress over the coming months. I'll be looking more at *DrawWorks Millennium* next issue. Contact iSV on 01344 455769.

# Pic of the month

This month's reader's picture comes from sixteen year old technical artist, Andrew Callicott. As Andrew describes 'The pictures are all based on model trains which I own. I began with the Class 90 in March 1997 at the age of 14 and completed the latest, the Class 2800, in January just gone. 'Some of the details are not quite as you would see on the real McCoy as the models are limited in that respect. Each drawing took about 10 hours to complete using a non-upgraded Risc PC 600.' Many thanks to Andrew for this unusual entry. Keep the pictures coming in and watch out for some news on an update of the usual monthly prize soon.



## In brief

### Art or national curriculum?

In response to suggestions from their educational user base, AVP has produced an improved and updated version of the popular Art in the National Curriculum CD. Billed by the company as '...a systematic introduction to topics and artists, concentrating on images needed to understand and appreciate the richness of our diverse cultural heritage', the CD has now been enhanced with more pictures, greater detail and even some video snippets.

It is a very large subject base to tackle with one CD, but the more classical elements are certainly very worthy of additional coverage in our schools. Of particular note are the English landscapes and human face sections which include a very wide range of depictions throughout the history of art. For further information, check out the Web site at http://www.avp.co.uk or contact AVP on 01291 625439.

### The show

Two shows should be down in the budding RISC OS artist's calendar for this year, beginning with the now infamous Wakefield outing this month. With both *Vantage* and *DrawWorks Millennium* debuting at the Yorkshire show, this cannot be missed.

On a slightly different tack is the Royal College of Art's 'The Show', running from 26th of May to the 4th of July in London. The Rector of the Royal College of Art, Professor Christopher Frayling says 'The show this year demonstrates that the College will continue to enrich all our lives in the next century....with over 6000 pieces on display, visitors will be glimpsing their tomorrow's today.'

Despite the inevitable Millennium hype that seems to be bombarding us from all directions, this collection of such a wide range of art from around the world, including features on computer related design, should provide something for everyone. More information on the College Web site at http://www.rca.ac.uk/ or by telephone on 0171 590 4444.

# Is it in the script?

*JavaScript Fresco©* has finally arrived, but a vocal section of *ANT* customers have the feeling that the flagship Web browser for Acorncomputers might be renamed *Fiasco*. Most *ANT Internet Suite* owners have been waiting months for the promised JavaScript and Secure Sockets Layer upgrades that should make *Fresco* almost as usable as the *Windows* alternatives.

Recently there's been a lamentable lack of communication by both ANT Ltd and latterly-appointed sales and support agents, *Argo Interactive*. There's been no sign of the SSL upgrade and many of ANT's beta-testers haven't even had the chance to try the JavaScript version of *Fresco* prior to its release. However it's now shipping, and users are finding out what works and what doesn't.

*Fresco* actually implements *ECMAScript*, a standards-based clone of Netscape Corporation's JavaScript 1.1 client-side scripting language. This should mean that any script which works correctly with *Netscape 3* will work with *Fresco*. In practice, you're just as likely to get a script error from the new *Fresco* as you are from *Internet Exploder*. It's a case of "whose standard it it anyway"?

While R-Comp's Javascript *WebsterXL* can measure up the Modem Speed test pages at http://homepage.tinet.ie/~leslie/testpage.htm, ECMAScript *Fresco* does not respond. Still, many of the demonstration scripts available from http://javascript.internet.com/ do work, and there are more useful working script resources at http://www.javascript.com/.

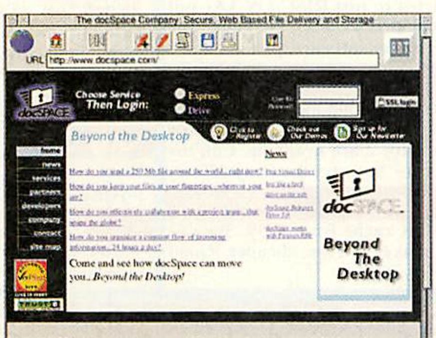
The page at http://the-light.com/colclick.html does work well, and it allows you to choose *Netscape* text and background colours for Web pages by pointing to the dot of the desired colour and reading off the values displayed. These values change as you move the pointer over the colour swatch. You then cut-and-paste the code segment into your page – an action regrettably not yet supported by *Fresco*.

The *ANT Internet Suite* JavaScript upgrade is available to existing owners for £22.95 excl. VAT.

Argo Interactive
E-mail: sales@argonet.co.uk
Tel: 01243 815 815

# Beyond the desktop

If you've set up a few Internet accounts with the free ISPs, you may be wondering how to fill up all that free Web space. A user with two *Freeserve* accounts and two *FreeUK* accounts could have about 80Mb of server space waiting to be filled. One idea is to use this Net-distributed disc-space as a security backup area for your precious harddisc data.




You could create archive files of your important documents and directories, and upload them by FTP to your various Web spaces. There are simple measures you can take so that no-one but you will be able to list the directories and their contents, and you'll still have plenty of room for your Web site as well if you cross-link all the pages and Web spaces with complete URLs.

Most Web servers are set by default to send out an index file in preference to a directory listing when no file is specified at the end of the URL, so placing a simple index.html file in a directory effectively hides the other contents from prying eyes. Only you who have FTP access to the site will know what files are in there.

The *docSpace* company has expanded this idea and offers file storage space and a browser-based filer interface, complete with secure transfer protocol for uploading and downloading files to your free virtual 50Mb docSpace Drive. Acorn users with SSL-enabled *Browse* can set all this up and retrieve their files, but unfortunately *Browse* cannot upload files as it does not support file upload from HTML forms. Ironically, this is a feature of the new *ECMAScript Fresco*, but it still doesn't have SSL! Checkmate?

*The docSPACE Company Inc.*
*http://www.docspace.com*

## In brief

### Home free with Clares ISDN

Following their successful Risc PC Internet offer featuring an internal modem and a Freeserve Internet account, Clares Micro Supplies have introduced an ISDN alternative. The £199 (inc. VAT) package includes an external ZyXel ISDN Terminal adapter, all the required software, pre-registration to Freeserve, and free installation of BT Home Highway (normally £99+VAT) or ISDN2e (normally £199+VAT – but see below).

R-Comp's JavaScript-capable WebsterXL browser is included along with the best of Acorn freeware for Internet access, plus Clares' own easy configuration system.

*Clares Micro Supplies*
*Tel: 01606 833999*
*E-mail: sales@claresmicro.com*

### Ahoy there!

Daniel Garrod's Jolly Roger Bulletin Board is back, ready to be plundered by the next generation of comms enthusiasts. Jolly Roger BBS is located in Harlton, Cambridgeshire, heart of Silicon Fen. Dan and his co-sysops Nigel Callcutt and Gareth Griffiths are sailing ahead with the re-launched ArmBBS system, uploading files, games and features. Available booty includes Psion Series 3m downloads from CD-ROM, with other cargo for all makes of computer, ranging from Acorn to Linux. Free e-mail and access from the Internet are on the horizon.

*Jolly Roger BBS*
*Modem: 01223-264347*
*Web: http://www.bigwig.net/jollyroger/*

### Highway low way

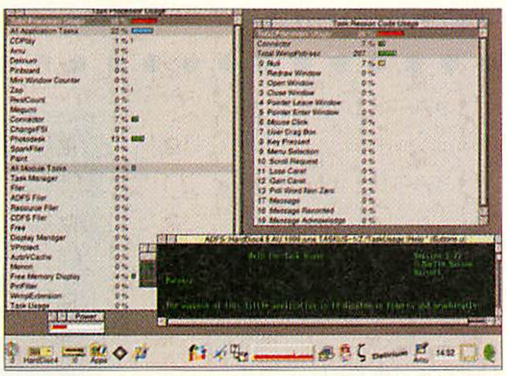
British Telecom has announced a range of special offers on second lines and digital connections from April 1st until June 30th. Second analogue line installation drops to half price at £49.50 inc. VAT, and there's £50 excl. VAT connection or conversion charges for digital services BT Highway and ISDN2. BT is obviously worried that its over-priced legacy convert-to-digital vision will be eclipsed by the cable companies' high-speed "always-on" Internet services, using new cable modem and DSL technologies.

*BT Web site: http://www.bt.com*
*Tel: 0800 222444*

# Usage

With the desktop of the average user being filled with an array of utilities and mini-applications that clutter up your iconbar before you've even touched the mouse, it can be rather useful to know exactly how efficient these programs are. Sloppy programming behind the scenes can leave an innocent and professional-looking program to soak up needless Wimp polls and put a real drag on desktop speed.

To identify the usual suspects, programmer Martin Avison has created a pretty comprehensive Task Usage application. As Martin describes 'The idea grew from a theory that some tasks seemed to take more processing power than they should, either permanently or intermittently, making the desktop sluggish. The main causes seem to be simple programming mistakes, or programmers being lazy, and ignoring the exhortation in the Programmer's Reference manual, page 3-116:



*You can disable some of the event codes: they are neither checked for nor returned, and need not have any handlers provided. You must do this for as many codes as possible, especially the Null_Reason_Code, if your task is to run efficiently under the Wimp.'*

Wise words, but occasionally not heeded by the novice programmer. Using the application and finding out who the culprits are is a relatively simple process. *Task Usage* provides a realtime barchart that estimates the processor usage of each application and module task running on the machine. This has been done before by Acorn's rather simple *Usage* application and Ran Mokady's program of the same name. Martin's application takes the principle much further with a Task Reason Code usage window, providing information as to what kind of work each task is doing. You can click on any application in the processor usage window and the Task Reason Code window provides a break down of the work done by that task.

While typing away to write this article I can see that despite not even having a window open, *Connector* is taking quite a nasty chunk of processor time, and that it's actually polling the Wimp about 600 times a second...

It has to be said that analysis of this kind is never particularly accurate. However, *Task Usage* does seem remarkably good at spotting the inefficient programs on the desktop.

Hopefully *Task Usage* will provide us with a valuable tool to improve the quality of our software, rather than starting a Wimp Poll witch-hunt. Still, it'll certainly be interesting to see the reaction of certain developers when they see their apps running alongside *Task Usage*. Download it from http://www.avisoft.force9.co.uk

# Acorn Arcade news

Acorn Arcade have done much in their 14 month long support of the PD games scene, and they're continuing this drive for low cost games with a new voting system. As AA Editor Tim Fountain describes 'Basically we're hoping to get people to tell us their 10 favourite PD games, we can then compile a league of games, and give 'awards' to the top ones.' Interested readers can e-mail a list of their top games to tim@acornarcade.com or browse to the Web page voting form at http://www.acornarcade.com/features/misc/league/vote.html

Also new on Acorn Arcade is 'The Coding Vault', described by the team as 'basically a joint venture with VOTI to try and get coders to finish off abandoned games to which we have the sources.' It's a great idea to try an revive stalling games projects, but it is unfortunate that it's had to come to this. If you want to check out the development possibilities available, or even add to the vault, you can browse to http://www.acornarcade.com/features/codevault/

## In brief

### CodeCraft

Post-Evolution, the demo scene has been typically quiet while the demo teams catch up with the rest of their work and begin to consider new projects. Alain Brobecker's CodeCraft competition is already getting things going again with a great deal of success, and it's great to see the competition mentality taking hold of the RISC OS community.

At the time of writing Paul Thompson, Augustin Vidovic, Pervect, Dennis Ranke, Stanislas Renan, David Schalig, David Gamble and of course a coder who surely must be a favourite for this kind of competition, Frederic Elisei, are all getting involved. An impressive list of coders at this stage – I can't wait to see the entries for the competition. For more information you'll need to browse over to http://www.cybercable.tm.fr/~brooby/

Check out my analysis of the competition and entries next month. Respect to Alain and all the guys involved in the project for keeping things moving on the scene. Watch out for the Evolution competition results in next months magazine.

### Emulating us

Among all the discussion over the future of our platform little has been said (unless I'm much mistaken) about the emulation of our OS on other platforms. It's hardly a secure future, but it's certainly a very interesting area which deserves a bit more attention from the user base.

Various projects are in the pipeline including Archie at http://www.geocities.com/SiliconValley/Campus/5427/ a system in progress at http://www.geocities.com/SiliconValley/Network/4946/marchi.htm and an emulator for Linux at ftp://ftp.compsoc.man.ac.uk:/pub/arcem/

I'll hopefully be covering the developments in more detail soon and I'd also love to hear your views on this area of work.

### Elite again

Plans are afoot to produce a Freeware follow up to Elite. Taking into account legal problems, and the obvious difficulty of producing a game that could meet the quality criteria for such an ambitious project, it's not going to be an easy ride. For more information you can point your browser to the project site at http://www.jades.org/tep/default.htm

# RISC OS

Following my comments on the future of RISC OS several people have been in touch to add to the discussion. Among them, author of the excellent *IClear* module, Martyn Fox. As Martyn states 'I have always maintained that the job of *IClear* could be done much better by the RISC OS kernel than by a module. *IClear* works by intercepting mouse clicks and key-presses and by sending messages to applications which are themselves intercepted by a filter. I've been pleased by the fact that this works for nearly all applications, but there is always the possibility of encountering an program that doesn't like it, or of it interacting adversely with another piece of software.

'*IClear* is also limited to inverting an entire icon and replacing all the text in it. The RISC OS kernel handles caret movement, and text entering and deletion in writable icons. If the kernel did the job of *IClear*, it could invert and replace a single word, the entire text or a section selected by dragging the mouse or by using the select and adjust buttons – a feature that could also be made available to applications such as text editors.

'As I've said many times, I made *IClear* freely available in the hope that it would be widely used and that consequently Acorn would take note and incorporate it as described above. I was a trifle disappointed at last year's Acorn South East show to be told by Chris Cox that this had not happened with RISC OS 4.'

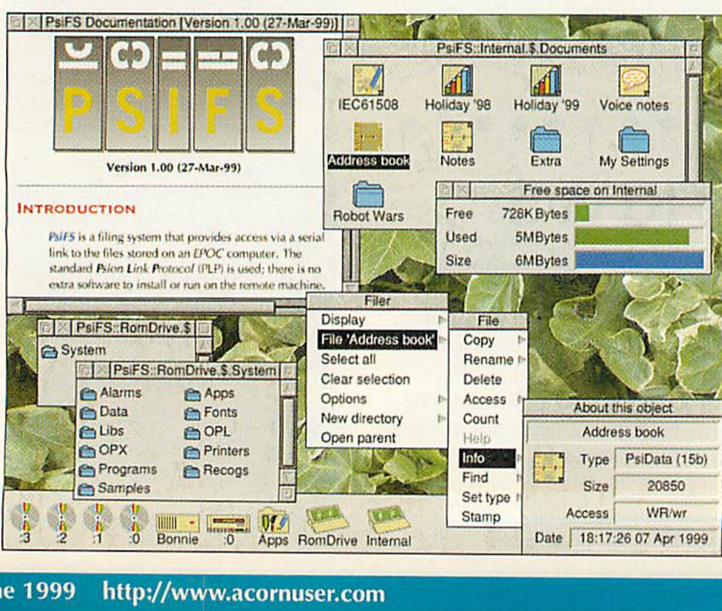
An all too familiar story from Acorn I'm afraid, but we've yet to see whether RISCOS Ltd will learn from the mistakes of the past. Please get in touch with your views on the future of RISC OS. What should be incorporated into our OS? What important changes need to be made to keep the RISC OS scene alive?

# PsiFS

Alexander Thoukydides has just released another useful freeware utility that helps to integrate other operating systems with RISC OS. This time it is the turn of Psion's EPOC16 and EPOC32, which are used in the Acorn Pocketbook and Psion Series 5.

*PsiFS* is a filing system that provides full access to the drives of an EPOC device connected via a serial link. It provides similar functionality to Interconnex's *PsiRisc*, but with the vital difference that it is completely free. *PsiFS* does not contain any file converters, but it does implement an intelligent read-ahead cacheing of directories that makes it significantly faster than *PsiRisc* in use, it also allows changes made to files on the EPOC device to be automatically refreshed in any filer windows.

When a link has been successfully established, an icon is added to the left-hand side of the iconbar for each accessible drive. These behave like any other drive icon; a single click opens a normal filer window that allows files to be copied by drag-and-drop, or loaded into a RISC OS editor by simply double-clicking. It could hardly be simpler. Download it from http://homepages.tcp.co.uk/~thouky/tcfp.html




*EPOC to RISC OS file transfer is easy*

## In brief

### Caves

Matthew Wilson has just released a new PD game described by himself as 'an obstacle course/shoot-the-aliens/puzzle game, with 40 levels.' The game can be downloaded from the Web at http://www. willson68.freeserve.co.uk

If anyone would like to comment on, review, host or distribute the game, Matthew can be contacted at willsons@x-stream.co.uk

### Multi-ISP

Free ISPs – there are loads of them available, so how many have you got? Two, three, four? If you reguarly use more than one provider you'll find *Multi-ISP* by Richie Whincup an invaluable application. It allows easy changing between up to four *ISPs* using the *ANT* Suite, and works by copying the contents of the Files Directory into *Multi-ISP* and replacing them with the selected Provider information. It can be found on the cover disc

## Contacting Me

You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, Tau Press Ltd, Media House, Adlington Park, Macclesfield, SK10 4NP. Or preferably, by e-mail (but no large files) to pdpage@acornuser.com

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Revision 14

# More power to your PC card

Those of us who prefer to stick with our trusty Acorns inevitably find it hard living in a PC-dominated world, where few recognise the value of Apples let alone our chosen platform. More fool them really, but we still have to cope. Nowhere is that more of a problem than at work. Now as work becomes ever more intrusive the chances are you may have to take it home with you. Well here's how your Acorn, with your PC card, can help. Not only can you run business software, you can also run your office computer.

*Laplink* is a software package for linking PCs together. It's now an impressive buy: *Laplink Pro* offers hook-ups via RS232 cable, parallel cables, USB, wireless, direct dial and Internet. Clearly not all of those will be of interest to Acorn users. But some will.

Installing the software has to be done at both ends of course, then you have to go through a host of set-up screens which allow you to define how your computer connects, what the protocols are, what facilities are to be allowed (from read only to a full take-over) plus, as you'd expect, a comprehensive security system that will demand a password when you log in.



Naturally you have to input any numbers for dialling, network addresses and so on. There's a lot to do – but it's fairly well laid out and you can manage without the informative instruction book if you're the type to try first and read later.

I've tried several hook-up methods using my hardware. In all cases the aim has been to take over a PC with the Risc PC, and though I have no doubt the reverse would also work, I don't have the need: I work at the Risc PC by choice – the other is a slave! Direct dial connection was simple and effective, but as you might expect it was a bit slow. It would certainly benefit from ISDN, but remember that would have to be available at both ends. Direct connection with the RS232 port sadly failed. I don't as yet know why, but I got nowhere with it as the port simply locked up. Using my newly installed network (more of which later I hope) does work and is considerably faster as might be expected.

Speed is inevitably the biggest problem. Direct dial is very slow, even when using configure to strip out unnecessary details like full colour, non-crucial graphics effects and so on. Direct cable connections ought to be considerably better and network connections are the best choice if that's an option.

So is it effective? Well yes it is – superbly so. I could well imagine that if I had an office machine I needed to work on without being there I could do so with minimum fuss. *Laplink* is an excellent utility that has no problems on the PC card. In fact, given that the link via a modem is bound to be slow, my guess is that the card won't introduce any extra delays. And yet you get access to the facilities, and to some extent the speed, of the remote system. After all, any processor-hungry tasks will happen at the remote end under full power, even if your screen update is very sedate. Naturally you do have the option of working locally and then uploading the file directly if that works better.

There is also a chat option which opens up screens at both ends where you can type and read messages – your own private, instant e-mail. A regular phone conversation might be better but on the other hand you can use messaging while also sending data or even controlling the remote machine – potentially useful if you need to explain what you are up to.

I mentioned earlier that the remote machine can, if you so wish, be well and truly enslaved. I must confess it is somewhat satisfying to have another computer appearing in a window on your machine. With the hardware connected over a network as mine now is, operating a remote machine without moving a leg muscle is easy. Now I'll have to invest in one of those automatic body toners because I won't even have to get up.

*Laplink* isn't cheap (over a hundred pounds) but if you have need of operating office hardware from your Acorn + PC card – you can. Just make sure the office pays your phone bills.

## In brief

### PC Cards – Future support

Now that RISCOS Ltd is up and running and there is a more certain future for RISC OS development, what of the PC card? First off, I'm told RISC OS 4, which as I write may make its debut in limited quantities at Wakefield, will not only support your PC card, but also offer something like a 20% speed improvement.

In the longer run, the question 'what next?' hits the rumour mill rather than concrete fact. Any replacement Risc PC board will probably support existing cards as the PCI option isn't realistic. But that's speculation at present. Having said that, a PCI capable machine may have surfaced by the time you read this, in which case PCI PC cards may be firmly back in contention. What's true, what's fantasy? Watch this space.

Meanwhile I note that Aleph1 now have some more PC cards available. So if you've been dithering, wondering about the future, you now know a new card looks like a decent investment. Also I note from RComp's Website that to go along with PCPro3, they have updated and improved PCSoundProfessional. PCSoundPro provides much improved sound support (PCPro omits support for MIDI for example) and gives you access to the kinds of game sounds and MIDI software that PC users now take for granted. Hopefully I'll be looking at the new PCSoundPro in more detail soon

## Product details

| | |
|---|---|
| Product: | Laplink Pro |
| Price: | £149 |
| Product: | Laplink Remote Desklink (no ftp) |
| Price: | £40 |
| Web: | www.travsoft.com |
| Supplier: | PC World, etc |

## Contacting me

You can contact me, Mike Buckingham, by post at: Acorn User, Media House, Adlington Park, Macclesfield SK10 4NP or by dropping me an e-mail at: pcpage@acornuser.com

# What's on the Cover disc

There are four main features on this month's cover disc: the movie trailers, the usual programs, some quick submissions from Mike Cook, and what was hoped to be a comprehensive section from ECS. However, all did not work out as planned, as you will see.

First off there's the replacement *!RunImage* file I promised you last month for Peter Kingsbury's *B_and_W* application. This should sort out the problem it had handling complicated files.

Then we have a couple of submissions from C W Seager, one of which will let users with older machine use Paul F Johnson's programs by providing 256 colour sprites for them.

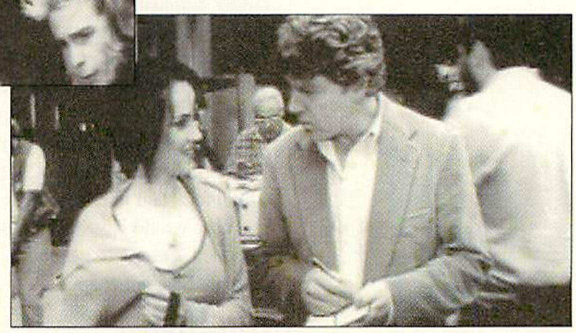
The other offering is PD program called *DeskFonts* written by Rob Davison. This enables the use of outline fonts on early machines. It allows the system font to be replaced in the desktop, and in this case improves the appearance of the windows.

Richie Whincup has put forward *Multi-ISP*, a wee application that lets you swap between providers without having to have multiple copies of the *ANT Suite* on your harddisc - this idea is a must when you start experimenting with the huge number of free ISP's that are out there.

There's also the normal batch of Run the Risc and *Info programs – Dave and Dave tell me these aren't coming in at the usual rate, so come on you programming johnnies, let's see what you've got.



Celebrity



## ECS

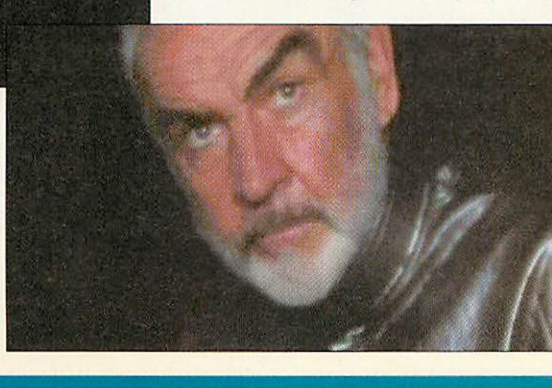
The applications and files from ECS on this CD-ROM are not quite in their intended form. For a start over half of them never made it through the Internet.

*ECS PresVr* is a viewer for presentations made with *ECS presenter*. This is all explained in the help file which comes with the *Wakefield* demo...only that doesn't run now it's got as far as the CD-ROM. This could be due to any number of reasons, and in the short time we had left we were unable to track the problem down.

To get the help files which are in *StrongHelp* format, you need to dig around a bit. Open the *Wakefield* app (by shift double-clicking on it). Then open Slides, then Resources, then HelpFiles, and inside are five wonderful examples of *StrongHelp* manuals. The latest version of *StrongHelp* itself is also on the CD.



Entrapment



If you want to see what the presentation slides would look like (if only *Presenter* ran) then you will have to load the AvantG font which is used in the drawfiles that *Presenter* uses.

Please ensure that you copy the files to your harddrive first as all of them work better that way – *LadyBay* and *NewSaver* won't run at all unless you do as they write to disc. *Presenter* needs to have seen a *Presenter* directory before it will run correctly, they show multiple pencil icon sprites – derived from *Draw*.

The *StrongHelp* manuals show the products which will be shown at Wakefield. *ECS Utils* and *ECS Presenter* are not ready for sale as yet, but should make it shortly. *NewSaver*, *LadyBay* and *Puzzler* are available now.

I hope you can get them running after all. *Acorn User* discs may carry working copies at a later date if there is space.

You can keep an eye on the ECS Website for updates on prices and availability at: http://www.innotts.co.uk/~ecsltd/ Tel: 0115 979 9684 Fax: 0115 9799685 or e-mail on ecsltd@ecsltd.co.uk.

Sorry if this frustrates a lot of people, I was most annoyed to find that the files had become corrupted, but as I say, time was short and there was nothing we could do. I hope it at least allows some idea of what ECS have achieved.

## Mike Cook's stuff

Mike provided a huge selection of files – mainly NASA material – most of it based around space and the planets in our system.



*Notting Hill*



*First sight*

Unfortunately the largest directory exceeded the limits of CDFS both in depth and file name size, so at the last minute that too had to be cut. Still, there should be a lot of useful information left.

Apologies if both this and the ECS offering look a bit half-baked. They were last minute additions in order to give you something extra, and didn't work out as we had hoped.

## Trailers

So, on to the film trailers. There are ten on this CD, kindly donated by Buena Vista/Walt Disney, 20th Century Fox, Entertainment Film Distributors, Polygram Filmed Entertainment, and UIP. All should be fairly current by the time you get this, although I do notice that The Waterboy is already advertising on TV.

If you're wondering why I didn't get Star Wars or The Matrix – well, I did try. But unsurprisingly they're a little reluctant to release such films willy nilly. It probably would have taken months of over-the-table talks with George to get Star Wars, and I think we're both too busy for that.

## Celebrity

*Starring Kenneth Branagh, Judy Davis, Leonardo Dicaprio, Melanie Griffith, Joe Mantegna, Winona Ryder*

The film follows a 'mild mannered reporter' (Kenneth Branagh) who covers the celebrity beat and gets somewhat caught up in their world. Lucky chap.

## Entrapment

*Starring Sean Connery, Catherine Zeta-Jones, Ving Rhames*

A story of a police entrapment. Master thief Sean Connery is lured into the trap by cop-temptress Catherine Zeta-Jones. They plan to pull off the greatest robbery the world has ever seen (don't they always) but has Miss Zeta-Jones fallen for our Sean – it's one of those 'will she betray him in the end?' films. Looks good.

## First Sight

*Starring Val Kilmer, Mira Sorvino*

A simple story line this one, a man and woman fall in love, but the guy's blind. She wants him to get his sight back, he undergoes an operation and bingo, everyone's happy. Next!

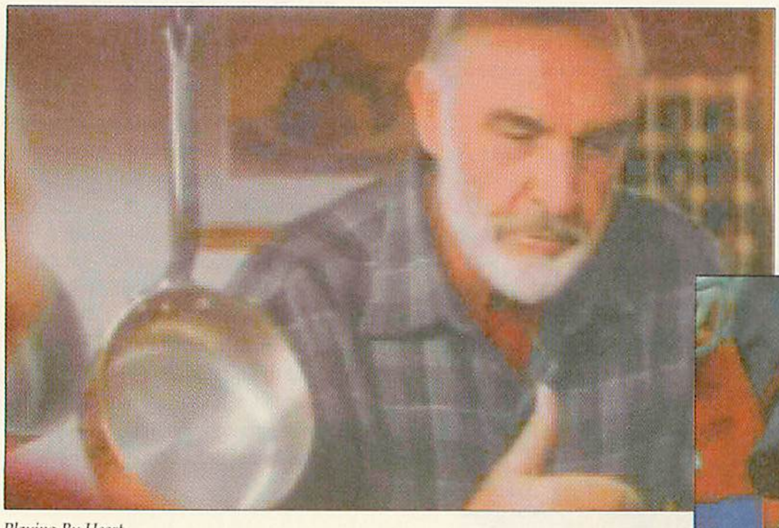
## Playing by heart

*Starring Gillian Anderson, Sean Connery, Anthony Edwards, Ryan Phillipe, Dennis Quaid, Gena Rowlands, Madeleine Stowe*

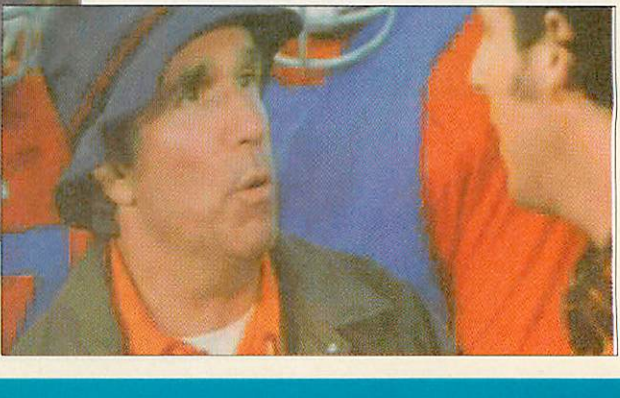
I'm a sucker for these ones. Lots of people try to fall in love, will they, won't they? Oh! Quelle surprise, they all did. Some cracking actors in this one, and a chance for all you X-file fans to see Miss Anderson looking a little more relaxed. Nice.

## The Mummy

When someone says 'You have unleashed the creature we have feared for more than 3000 years, he is the bringer of death, he will never stop!' then you know



*Playing By Heart*

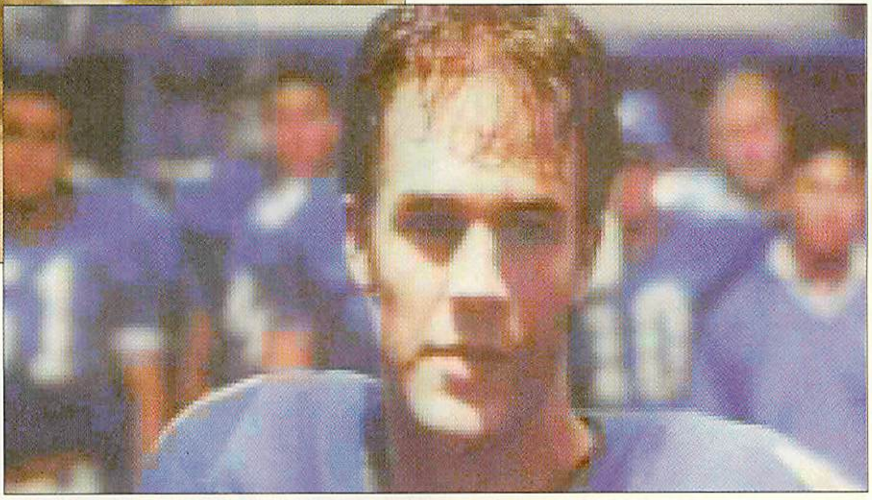


*The Waterboy*



The Mummy

Varsity Blues



you've gone and boobed somewhere along the line. This looks a good film, full of nice effects, and much better than I had anticipated when I heard the title.

## Notting Hill

*Starring Julia Roberts, Hugh Grant, Rhys Ifans, Emma Chambers*

If you like Hugh Grant then you'll love this. It's produced by Richard Curtis and seems to have a similar feel to you-know-what. It's a story of an ordinary boy and the world's most famous actress falling in love (happens all the time). It also stars the dizzy one from the Vicar of Dibley and a funny half-naked welshman. Good stuff.

## Office Space

*Starring Ron Livingston, Jennifer Aniston, Stephen Root and Gary Cole*

Nothing to rival Spartacus here, but it looks fun, and is something we can probably all relate to. It tells the story of a bunch of people who hate their jobs, try to get fired, fail, then decide to rip off their company as pay-back. Angry employees, see this film inspiration (I've made extensive notes).

## A Simple Plan

*Starring Bill Paxton, Billy Bob Thornton, Bridget Fonda*

Three friends stumble across a crashed airplane stuffed full of cash. Naturally they decide to keep it and tell no-one. However, the pressure soon starts to tell, and the addition of a dodgy FBI agent doesn't improve matters.

## Varsity Blues

Starring the chap from Dawson's Creek, this is a film which looks at American Society, specifically the way in which it's sporting stars live and behave. It's based around a college football team, its coach and star player. 'We have the rest of our lives to be mediocre, but now we have the opportunity to play like gods. Let's be heroes'. A good one for rednecks and Dawson fans.

## The Waterboy

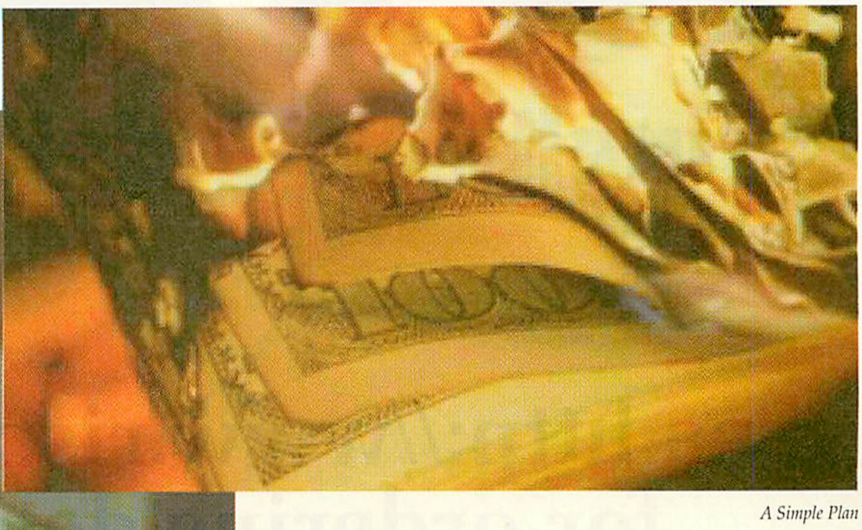
*Starring Kathy Bates, Fairuza Balk, Jerry Reed, and Henry Winkler and Adam Sandler*

Excellent. Sports, goofy guys, lovely ladies, the Fonz, and lots of laughs. No doubt it'll be a big hit when it opens.

END



Office Space



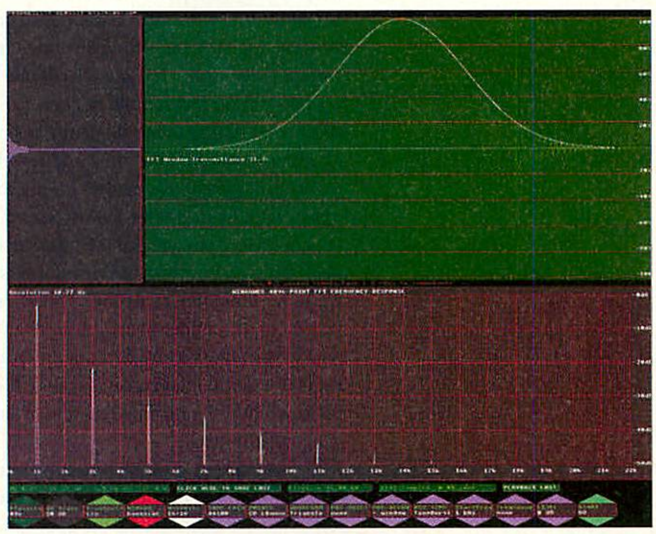
A Simple Plan

# Putting out signals

*Mike Cook looks at an audio bargain*

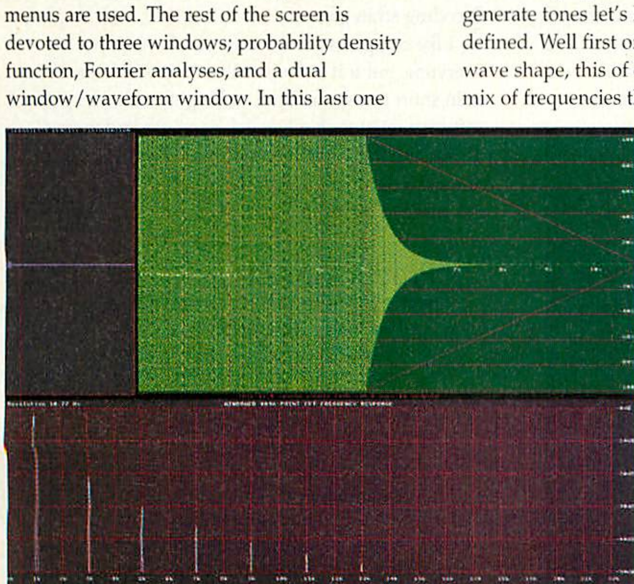
*DigSigGen* is a perfect example of the power and flexibility of our favourite computer being put to a very specialised use. Basically this application generates digital audio files of test tones for transferring onto an audio CD. These tones can then be used to test audio circuits to CD quality standards. Granted this is not an application that will find a favourite place in everybody's software collection, but if you need test tones tailored to your own specification then this is not to be missed. It can also be used by people taking a course in signal processing, or electronics in general, as it is a most comprehensive synthesis /analyses tool for waveforms. The specialist nature of the software means we can forgive it for not corresponding to the normal desktop standard. Instead it requires the computer to run in 16 colours, with a resolution of 1280x1024.

When the application is run it occupies the whole of the screen. All the controls are arranged along the bottom of the screen and can be incremented or decremented by a click of the mouse; no other controls, parameters or menus are used. The rest of the screen is devoted to three windows; probability density function, Fourier analyses, and a dual window/waveform window. In this last one we really have a window (computer screen area) showing the window function (filtering of the signal), it's just unfortunate that the same word is used for different concepts.



The window function also serves as an envelope for tone bursts, as well as giving you a simple look at the waveform in the time domain, or how it would look on an oscilloscope. This is less than perfect as at higher frequencies the display just looks like a collection of random dots or lines on the screen. This is due to sampling rates and scaling of the display, and as this is not the prime purpose of the package failure to rescale the display can be forgiven.

As the purpose of the package is to generate tones let's look at what can be defined. Well first of all you can choose the wave shape, this of course will determine the mix of frequencies that will be produced. For example a sine wave contains just one spot frequency, or the fundamental. All other wave shapes are made from a number of sine and cosine waves. These are added together at frequencies that are an integer multiple of the fundamental, or to put it in the jargon, harmonics.



*DigSigGen* allows you to choose from the standard wave shapes; sine, square, triangle and sawtooth. However, there are also a number of random waveforms. A random waveform basically sounds like hissing and consists of a mixture of frequencies that are not harmonically related. As such there is no pitch with a random waveform, but the spread of frequencies affects how it sounds.

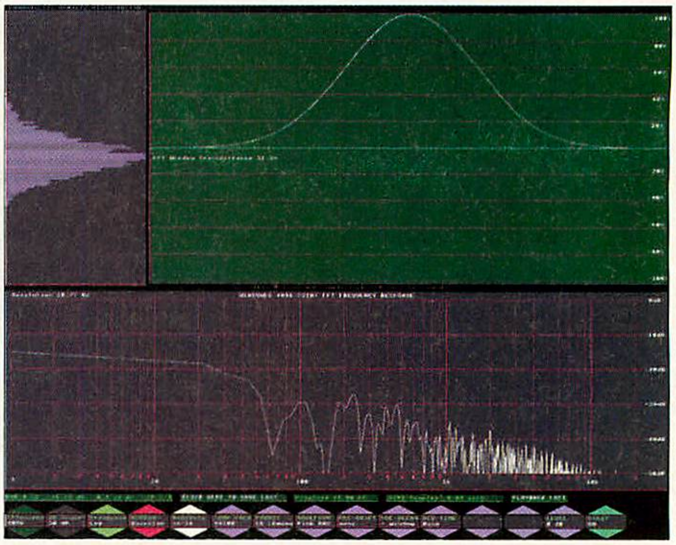
This is where the probability density function window comes in, it shows you what spread of frequencies are present in the waveform. For example a 'Flat Random' waveform has an equal probability of any frequency at any instant. Therefore it comes as no surprise that a 'Gauss Random' waveform has a Gaussian shape to it. Pink noise has a greater probability of lower frequencies, while red noise has even more. Remember that this is still noise and will still sound like a hiss, but the hiss will have different audio characteristics.

A specialist waveform is the Sin+Cos, this outputs a Sine wave on the left channel and a Cosine wave on the right one. If you view this on an oscilloscope, with one channel driving the X deflection and the other driving the Y, then in a perfect system you will see a circle. Any distortion or difference between the two channels will result in the circle being distorted. Finally there is an intermodulation test

waveform, this is in fact two tones of different frequencies and amplitudes.

Having selected the waveform you can then select the frequency, and like all the other parameters you need to click through the preset values.

The length of the tone can be set, here it is done by the rather oddly named Pre-Decay time. This is the length of time before the tone starts to decay, but it is not the most obvious of names to define the tone length. When writing to CDs you can't record a track shorter than ten seconds, so if you only want a short tone then you can add some silence of 'Pre-Quiet' to the tone.

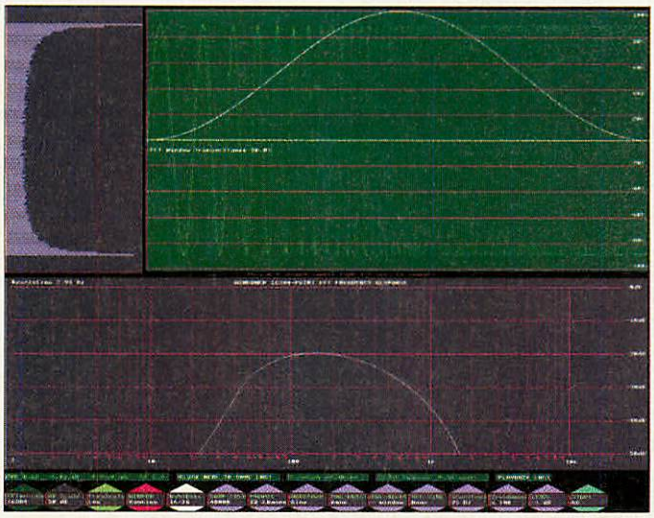


Next you will want to set the volume or level, again predefined but here usefully in terms of decibels. The full amplitude waveform is defined at 0dBs but there are some higher values for deliberately producing clipped waveforms. You can also define the number of bits per sample and sample frequency. Finally you can select some effects to modulate the basic tone, these are a frequency sweep, tone burst and reverberation.

With all the choices made, clicking the Go button actually generates the waveform, which in due course is drawn and the Fourier analyses displayed. At this point the waveform is also saved in a fixed name file inside the application. If you have a 16-bit sound system you have an opportunity to hear your creation by clicking the 'play last' box. If it is to your liking you can save the file, although this is really just a rename function to stop the file being overwritten.

If you want to save the screen (very useful for reviews) pressing the * key on the numeric pad saves the screen inside the application in a series of prenamed files. The numbering sequence starts up every time you open the application so don't be caught out thinking the earlier screen saves are preserved. The program should really read what files are present, and then start numbering them from there.

That is really all there is to it, but what you need to know is what waveform you want and how you are going to use it. The manual quite rightly makes no mention of this as really this needs a text book on audio amplifiers to do the subject justice. While you can listen to the tone on the computer this will not be at the highest possible quality. To get the best results you really need to assemble these tones onto a CD.



Traditionally these test CDs have cost much more than the price of this package and usually they don't have all the waveforms you want. However, if you don't have your own CD burner then Atomic Software can supply you with a test CD of their own. Naturally it is made using *DigSigGen* and very reasonable priced at £8.99. If purchased with *DigSigGen* then there is a discount of £5 on the combined price.

As I was finishing this review an updated version arrived on my desk. This has added to the types of waveforms that can be generated by implementing a dithering function, in effect adding noise to an otherwise pure sound. I have not had time to fully check this out.

So who would want to use this? Well audiophiles can test their CD player or computer sound card and see if the performance is really what it is claimed to be. Service engineers can use this to check up on an audio repair, and sound engineers can check equipment. By encoding these tones in MPEG format manufacturers of digital TV equipment can check out the sound quality given by different chip sets. It could also be used by software writers to compare MPEG decoding strategies.

Like computers in the early days, this is not for everyone, but if it is for you then you will know about it. In short this is a unique and highly technical piece of software set at such a low price you are in danger of dismissing it. On another platform you could easily move the decimal point in the price by at least one place to the right. END

## Product details

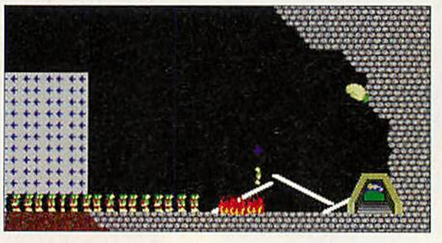
Product: DigSigGen
Price: £27.95
Supplier: Atomic Software 1 Fells Grove, Worsley, Manchester, M28 7JN
Type: Precision audio signal generator
Requirements: StrongARM Risc PC, 1Mb VRAM, 16 Mb RAM, monitor capable of 1280x1024 graphics. 30Mb+ Harddisc space free, 16 bit sound system.

# Frogger and friends

*David Watkins reviews APDL's latest games CD's*

Public domain libraries are the life blood of the user base. They form a valuable link between amateur programmers and enthusiastic users, and we'd be in a much sorrier state without them.

Five years ago there were about six major PD libraries, but around half of those have now closed – DataStream (1994), Arch Angel (1996) and the Datafile (1998). Thankfully their contents have not been lost as APDL (Archimedes Public Domain Library) has merged them with its own.

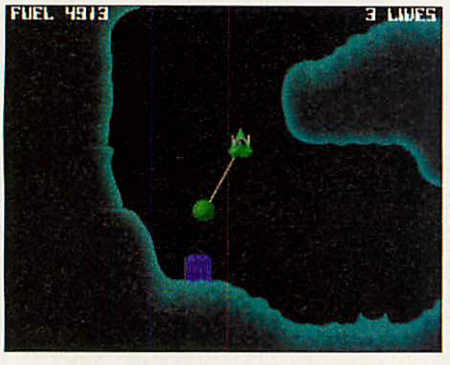


## APDL Games Collection No.1

From it's vast and valuable software resource, which includes thousands of PD games, APDL has selected 20 of the best PD and freeware titles and put them on a CD-ROM – they run on all machines from a 2Mb A3000 to a StrongARM Risc PC. The games can be played directly from the CD while still allowing High Score tables to be maintained, and all at a cost of £7.90. Not bad, eh?

PD games software can range in quality from unfinished experiments to clone-like versions of commercial products. I'll try to say something about each of the games, but don't expect 20 separate reviews, there's not enough room.

**ArchieMan** is a traditional *PacMan* clone. It's a nice and smooth rendition with most of the features I remember from the original, including ghosts, power pills, fruit, and lots and lots of dots to eat.




**CTetris** runs in a 256-colour mode. It uses colours instead of shapes and it's a must for *Tetris* aficionados.

**Invaders** also needs a 256-colour mode. It's a shoot-em-up of the Galaxian genre, with superb action and fantastic graphics. It needs the ARM Club's *StrongGuard* on a StrongARM Risc PC.

**Minesweep** is a reasonably faithful version of the *Windows* desktop game. Both the grid size and the number of mines are configurable.

**Thrust** is not a complete game – there are only five screens to complete. Nevertheless it is an excellent version of one of the best games ever. It's the one with the sphere, hanging pendulum-like from your ship in the labyrinth. It's been in my Games directory since I found it on the author's Website, last October.

**Lemmings** also needs *StrongGuard* on a StrongARM Risc PC. Slight differences in the effects it employs (compared with the original) and 30 new levels to play, make this one addictive.

**Willy** is the ZX Spectrum game *Jet Set Willy*. It's a platform game with 99 objects to collect from named rooms. This is a game for nostalgia freaks – read the History file for a real feel of the early eighties,

**XOR** is a brilliant clone of the superb BBC B maze game. The puzzles are still as challenging as ever, and the objects, which include sliding chickens, falling fish, bombs and dolls are just wonderful.

**Castle Blackheart** is a maze game. Your sword-throwing hero collects boxes of treasure, scrolls, keys, and food, while battling with the resident heavies in a quest to save his fiance.

**Blobby2**, **Goop** and **Splodge** are platform games with similar themes – you control an amorphous lump that can squeeze through narrow gaps to avoid the baddies. They are great fun to play, and the action is fast and




furious – so fast in fact that they need *StrongGuard* on a StrongARM Risc PC.

**Bombz** and **Firebolt** are maze games. In *Bombz* you collect detonators to explode the bombs, while in *Firebolt* you just drop the bombs and run away. *Firebolt* is for 1-4 players and includes joystick support. Both games come with their own level designers, and are highly addictive.

**Mosquito** is a flight simulation created using the Simis Flight Simulator Toolkit. The mission is set in the islands off the coast of Scotland and the mosquito is up

against BV141B light bombers and ME110D escort fighters. The aircraft, mosquito controls, and the mission are fully documented – and there are even bridges to fly under.

***Cyberwar*** and ***Swarm*** are shoot-em-up robot wars. *Cyberwar* has proximity mines, heat-seeking missiles, plasma cannons and missile cannons, and there's also a two-player option. *Swarm* is an epic in its own right, with stunning graphics, excellent gameplay and smooth action.

***Bouncy*** is a game which uses a simple idea to great effect. Platforms change colour when you roll a bouncy ball on them. There are 50 levels and they're not that easy, believe me.

***Powerball*** is a *Breakout* clone. It has 20 levels and can be configured to run at different speeds to cater for older processors.

***Tanks*** is a shoot-em-up. You can choose different perspective views, and can interact with the scenery as you manoeuvrer your tank between buildings, around trees, behind hills and along roads, either avoiding or attacking the enemy tanks.

There's something on this CD-ROM for every type of Acorn games player and, at under 40p per game, this collection of PD and freeware games represents excellent value.

## APDL Games Collection No.2

This CD release includes a useful utility, *SlowMotion*, which is provided for games that run too fast on a StrongARM machine. This utility has also been added retrospectively to the Best Games Collection No.1 CD-ROM.

***Kick-Off*** is a football manager game whose value more than covers the cost of the whole collection. There are 88 clubs in four divisions, and a season (which takes a good hour to complete if you're doing it properly) involves each team playing every other team in its division both Home and Away. You start in Division 4 and have 50 seasons ahead of you. What is more, it's a multi-player game and up to four managers can compete against each other.

***RailPro*** is a simulation of the traffic-control room in a railway station, where you direct trains to their correct destinations by controlling signals and points. It comes with a map designer and 12 ready-made maps. This is a game for anyone who has ever played with toy trains.

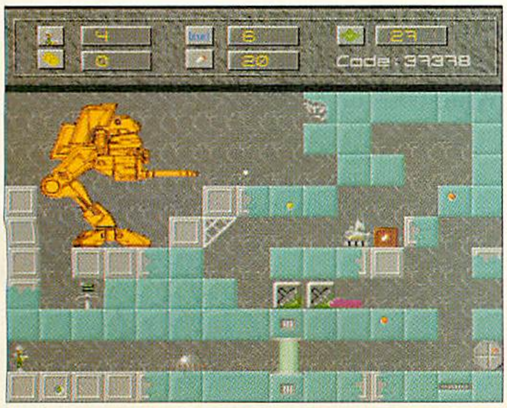
***Hangman*** is the traditional game where you guess the letters or build the gallows. It comes with a list of 200+ words which you can replace to enable Hangman games to be tailored for specific individuals, and for different levels of literacy.

***Grey Thunder*** is a good example of an iconbar game – one that is played on the iconbar, rather than on the desktop. It's a horizontal-scrolling, shoot-em-up involving nasty bouncing balls, nasty cones and nasty green monsters.




Also horizontally scrolling, ***Bunny Race*** is a platform game. As Elvis the bunny you bounce your car between platforms to reach the finishing post at the end of the level. You do have a carrot-canon, but watch out for those turnip bombs…

There are three more platform games on the disc, all excellent in their own ways: ***Manic Miner*** is the original and definitive platform game for nostalgia freaks; ***Botkiller*** (currently my favourite from this collection) is a strategic shoot-em-up with really nice effects and 30 levels of lovely puzzles to solve; while ***Son of Gyrinus*** has you collecting crystals while avoiding the baddies.



Other games for nostalgia freaks include ***Frogger***, that road-crossing amphibian, and an *Invaders* clone called ***Blitzer***, both of which were written using Andy Southgate's *Amnesia Game Suite*. *Tetris* aficionados will love ***Hatris*** – it has falling hats and sports 50 levels of increasing difficulty.

The maze games in this collection display a variety of styles and special effects. In ***DStar*** you collect items using either of two controllable objects – a ball (the collector) and a block (a moveable barrier). Once pushed, the object keeps moving until it hits something. You have to position the block so that the ball can be lined up with the collectables – not as easy as it sounds. There are 25 levels and there's a level designer, too.

In ***Polltax*** you are trapped in the catacombs under Hackney Town Hall where there are 60 levels of block-pushing and cash collection to work through.

If you prefer to blast your obstacles out of existence then there's ***Bomba Man***. You have to be nimble though, to avoid being hoisted by your own petard.

Originally written for the IBM XT, ***Digger*** is a version of *Boulders* (*Mr Do* or *Mr Ee*, depending on your formative game-playing years). This one features an earthmover which resembles a mechanical pair of scissors, and the obligatory two types of green meanie. There are 36 level files and a wealth of command line options to play with.

A maze game of a different type is ***Kryten***. It's a text adventure based on the Red Dwarf television series and books. Smeggin' brilliant!

There are two patience games – ***Taipei*** and ***SPatience***. In *Taipei* you remove matching pairs from a stack of 144 Mah Jong tiles, while *SPatience* offers a selection of the traditional one-player card games. It uses a script language, allowing different types of patience game to be created, and comes with nine ready-made scripts.

The remaining two games are both two-player and work well in an educational setting. ***Sim*** involves joining dots together without making a triangle, and ***Fall Through*** has players alternately typing letters on the keyboard to cause balls to fall down the screen.

All the games on these CD-ROMs are public domain and freeware. They are examples of the best games produced by enthusiastic and dedicated amateurs, and have been selected to represent a wide range of game styles. You're sure to find half a dozen games that you'll come back to again and again. The CD-ROMs represent an easy and convenient way to collect these forty games, and buying it supports our PD libraries. At £7.90 you're certain to get value for money.

**END**

### Product details

| | |
|---|---|
| Product: | APDL Games Collection No.1 |
| Price: | £7.90 |
| Product: | APDL Games Collection No.2 |
| Price: | £7.90 |
| Supplier: | APDL, 39 Knighton Park Road, Sydenham, London SE26 5RN |
| Tel: | 0181 778 2659 |
| Web: | www.apdl.co.uk |

# Keeping Control

*Michael Cowgill continues his series on MIDI controllers*

It is now some months since you read my last music page in *Archimedes World*, when, if you remember, I covered Pitch Bend and Modulation controllers. Steve Turnbull has kindly allowed me to complete unfinished business in this magazine, so this is the first of a few articles dedicated to explaining the remaining MIDI controllers. This month I am going to talk about Volume, Expression, Pan, and the three switch controllers: Sustain, Sostenuto and Soft Pedal.

First of all let's discuss Volume and Expression controllers. Both these occur in GM, GS and XG specifications, although earlier systems do not recognise the Expression controller. They are assigned to controllers 7 and 11 respectively, and both affect sound levels. This raises the question: why should anyone want two controllers which do exactly the same thing?

## The sum of the parts

The answer to this also explains why systems earlier than GM do not have an Expression controller; early MIDI compatible systems tended to be monotimbral, that is, they could only play one sound at once. By the end of the 1980s however, MIDI sound-generation gear started to be capable of playing more than one sound at once.

This was partly the result of the invention of the Sample & Synthesis method of sound generation at the turn of the decade. This, combined with the steady fall in RAM prices during the 90's, meant we were able to store far more sounds in a Wavetable MIDI Sound Module than was possible, practical, or economic before.

The General MIDI specification, drawn up in 1991, states that a GM compatible device must be 16 part multitimbral, that is, able to play 16 independent parts at once. Suddenly there emerged a need to be able to balance all these sounds so that one is not overpowering the others in the "mix". This is now the designated role of the Volume controller.



This then raises a dilemma. If the Volume control is already in use, how do you control the dynamic range of parts such as brass, organs and strings when using velocity for this purpose is not appropriate?

Enter the Expression controller – this can provide a dynamic level between 0 and 127 within the volume set for that part. Of course you can still use the Volume controller for this purpose if you want to, however it is now considered good MIDI practice to adopt the procedure I have outlined. In fact this saves you from having to trawl through the event list, altering all Volume controller events when you decide that the French Horn is too loud right through the mix.

## Panning out right

Now to the Pan controller. This is the controller that defines the stereo position of a part, and is assigned to controller number 10. At first sight the use of this controller seems obvious, but there are pitfalls into which the unwary may step if they are not careful.

Firstly, be careful how wide you set the stereo sound-stage. Panning parts full left or right is fine if you know that your MIDI creation will be played back on a decent stereo system, but you may find that your masterpiece sounds like a jumble of instruments when played back in mono.

If there is a possibility that your music will be played back on a mono system, make sure that you don't use pan settings which are much more than 10 positions left or right of centre, but if you do (and do this anyway) make sure you play back the result on a mono system before you commit it to permanent media. That way you will know whether it sounds OK or not. Secondly, obey these (very) general rules:

- Always pan drums to the centre;
- Panning bass parts anywhere but centre is a waste of time as the human ear finds it difficult to perceive the direction of bass parts;
- It is advisable to use a stereo sound-stage of no more than 45° either side of centre unless you are aiming for a wacky effect.

## Pedal power

This just leaves the three switch controllers; Sustain, Sostenuto and Soft Pedal. Of these, GM and GS specifications only recognise the first, but DMI card owners with the DB50XG fitted will have the luxury of the other two. They are assigned to controllers 64, 66 and 67 respectively, and their use will be immediately recognised by pianists.

For those of you who are not ivory ticklers; Sustain, when on, will leave a note (or notes) playing until it is put in the off state; Sostenuto sustains the last note struck, and Soft Pedal reduces the velocity level at which the note is "struck". The "Off" state of these last three is usually defined as a value less than 63, and the "On" state as greater than 64. END

### Contacting Me

You can contact me by writing to Michael Cowgill, The Score Machine, 22, Nelson Street, Retford, Notts, DN22 6LP or e-mail: mcowgill@scoremac.demon.co.uk

# Planet Earth

*Mike Cook puts two earth and space CD's through their paces*

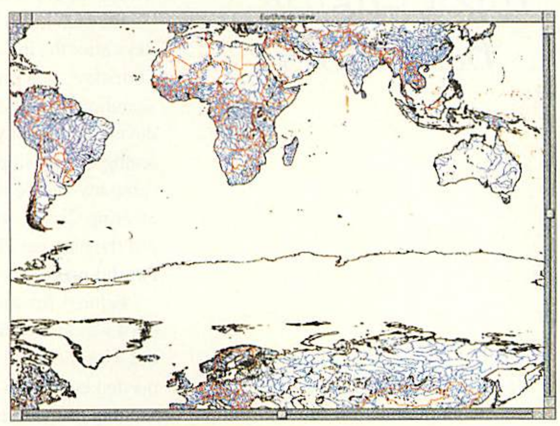
**Earth Data** consists of two major applications, *Earth Data* and *Earth Map*. *Earth Map* is a piece of freeware by John Kortink and it uses a huge database consisting of 5,719,617 line segments, describing coordinates and shape of a number of natural, and man-made features on Earth.

Its only function is to plot these line segments as a map, and it is debatable how well it does this. If you choose the option of cacheing all the files then scrolling round the globe is not too bad, but that will only work if you have 14Mb of free memory. If not then there is the option to cache sections of the map.

The images can be exported as drawfiles, where you can pull segments apart, or create worksheets for pupils. The scrollbars do not work properly, and although the scroll arrows do work, the movement is wrong. Longitude wraps around which is fine, but so does latitude, and that makes the north pole adjacent to the south pole. This is admitted in the instructions but is really not good enough.

Furthermore I suspect that the map coordinates are in latitude and longitude, and these are simply plotted in terms of screen X and Y coordinates. The result is the distortion of coast lines and the enlargement of areas close to the poles. As freeware it is value for money, but only just.

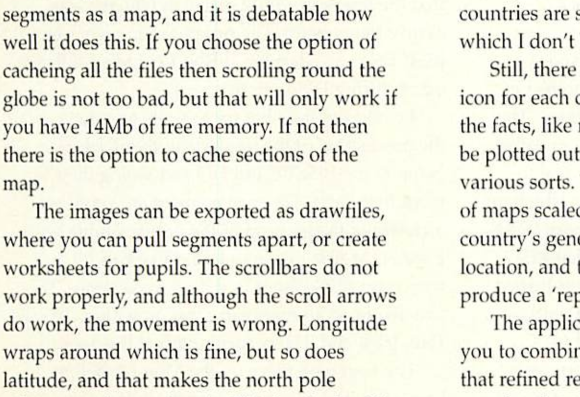
I had a bit of trouble getting *Earth Data* to load, sometimes it would, and sometimes it complained that a library module had failed to load. When it did get going the application is an exercise in large menu structures, full of those facts about countries that are as dull as ditch water and which passed for education sometime in the 1930s. I also think some of the data is made up. For example literacy rates in all developed countries are shown as 99%, which I don't believe.



Still, there are nice flags on the icon for each country, and some of the facts, like religious beliefs, can be plotted out as a graph of various sorts. There are a number of maps scaled to show the country's general and/or precise location, and there is the ability to produce a 'report' on a country.

The application also allows you to combine section filters, so that refined reports or cross-correlated statistics can be produced. Finally, data can be output in the form of CSV files, these are stored in a file ready for importing into a spreadsheet or other applications.

***Earth in Space*** is now into version 4 and claims to have "all the astronomy related material anyone is ever likely to need, and more", a statement I do not agree with. Sad to say this is a very sparse collection indeed, what is worse, the quality of the images is appalling. There are two ways of viewing some of these files, the first is an HTML-based system using *Webite*, and the second uses an unregistered copy of the shareware product *Powerbase*, which the start-up screen says you are obliged to register.



The HTML is simply a list of subjects leading to a single picture. The database navigation is not much better, but does lead to some explanatory texts. Unfortunately not all the images are referenced this way, and if you were only to use these forms of presentation you would be missing out.

The presentation on manned missions simply scrolls through the name, short description, number of orbits and launch date, while displaying the same image of an Apollo Lunar Module in orbit around the Moon. However even this data is not consistent.

The entries stop in 1990 and the Russian flights between 1983 and 1986 are missing altogether. The unmanned section is even worse. Several important probes like Viking 2 are missed out, and it ends in 1977 with Voyager 1 and Voyager 2 sharing the same launch date, when in fact there were 16 days between them. The more I delved into this resource the less happy I was.

It is worth pointing out that these products are possibly the lowest priced CDs availiable on the Acorn market, and are popular with many users. However, from my own standpoint, this is one package I can't recommend. END

## Product details

| | |
|---|---|
| Product: | Earth in Space V4.0 & Earth Data CD-ROMs |
| Price: | £9.90 each |
| Supplier: | APDL 39 Knighton Park Rd. London SE26 5RN |
| Tel: | 0181 778 2659 |
| Fax: | 0181 488 0487 |
| Web: | www.apdl.co.uk/ |

# Phoenix Rising

*Alasdair Bailey speaks to RISC OS's three most eligible bachelors*

The release of the RISC OS 4 upgrade signals a very important change in the way our operating system is developed. Although Acorn did most of the groundwork on the upgrade, it was the team at RISCOS Ltd who transformed an operating system which had little more than the bare essentials, into a major upgrade for existing hardware.

RISCOS Ltd is the result of a plan hatched just days after the initial Acorn shock on 'Black Thursday'. It is primarily funded by the shareholdings of existing Acorn dealers and developers, all of whom have a vested interest in seeing the development of RISC OS continue. The company we see today resulted from the so-called Steering Group, which failed to secure a deal to put the planned Phoebe Risc PC II into production, but did make excellent headway with Acorn/E-14.

Before Christmas, the thinking was that RISC OS 4 was almost finished. However, things turned out a bit differently, and a fair amount of work was needed before the upgrade could be sold to existing users. A deal was done with Acorn over Christmas whereby RISCOS Ltd would be formed with a one fifth of shares held by Acorn (or Element 14 as they are now known). The rest of the capital came from the Acorn dealers who were already involved with the project. It is worth pointing out that the Element 14 stake in the company is primarily a profit earning one as opposed to a controlling stake. If RISCOS Ltd do well out of what is, essentially, ex-Acorn technology, they'll want to still have their fingers in the pie.

The rather vague announcement which was posted at the Acorn Midlands show just before Christmas referred to this deal, but its statement that the upgrade would arrive in January was clearly too hopeful. The programming work on RISC OS got underway at RISCOS Ltd's Midlands office during February this year.

I could not possibly try to write an article about the production of the upgrade without actually going to the RISCOS Ltd HQ and seeing their work first hand. The management are very keen on keeping the location of the programming work a secret. At first this may sound like bad PR, but when you think about it, it does make sense. This way the programmers can carry on without every Tom, Dick and Harry turning up at the door.

The visit took place on the Monday before Easter Sunday, about two months before the upgrade was scheduled for release. I was issued with instructions to arrive at a Midlands rail station at 10:30am and told that my onward travel arrangements would be taken care of.

As I leave the train, I am greeted by two hooded men. 'You from *Acorn User*?' they grunt. Before I can answer, I'm bundled into the back of a white van and driven away. I try to remember details of the route we're taking but the van is travelling too fast.

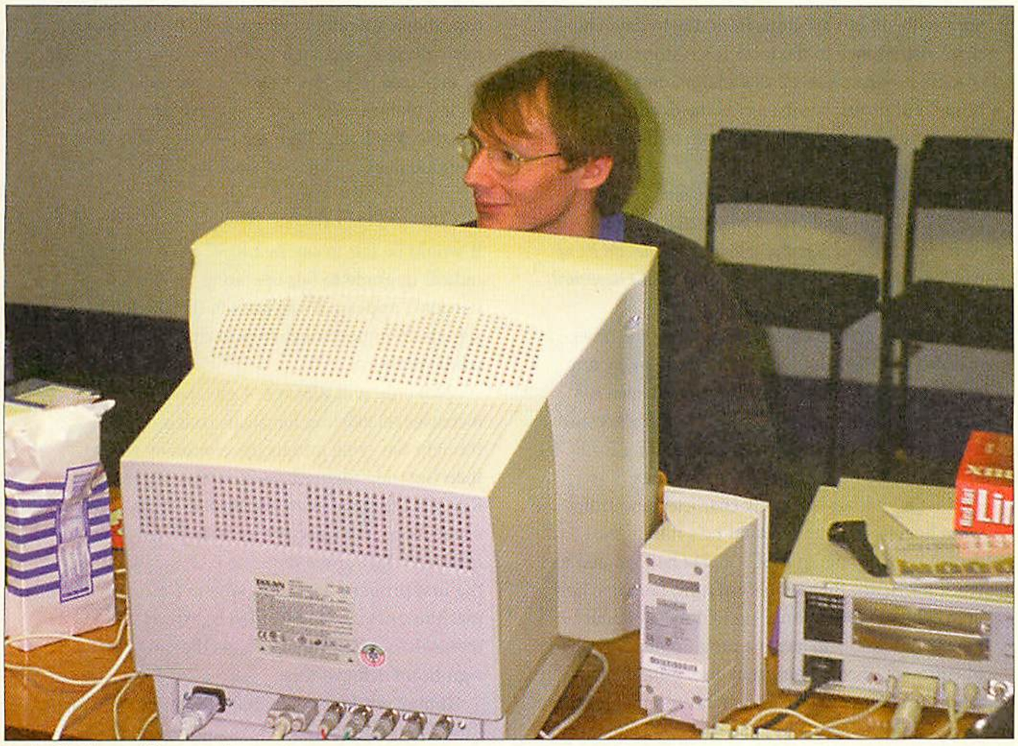
After what felt like hours, the van stopped and I was dragged into the reception area of a small industrial unit. I sat there for a while, dazed and

*Technical Director Andrew Rawnsley*



## Hardware

| | |
|---|---|
| Server: | a Linux machine with 3 x 9Gb LVD Ultra-Wide SCSI drives in a hot swappable RAID array with 128Mb of RAM and P2 400s. |
| Development Machines: | 32Mb to 64Mb StrongARM Risc PCs with 2-4Gb hard drives. All have 19' monitors, stretching the VIDC20 to its limits running 1280x1024 at 75 or 80hz. |
| Backup: | CDR(RW), Syquest and Zip. |
| Internet: | ISDN LAN router. |
| Printing: | via a 1200dpi postscript LAN printer. |




Justin Fletcher – mild mannered computer programmer

confused until Andrew Rawnsley, technical director of RISCOS Ltd came and greeted me. He explained how it's very difficult to get good taxi drivers in the Midlands and we move on.

The RISCOS Ltd office is a large room with white walls and two windows, both with their blinds very firmly closed. Only the programming takes place here, explains Andrew, the sales and marketing is all taken care of at the Cardiff office.

I am introduced to two of the senior programmers – Justin Fletcher and Matthew Bullock – who both work full-time for RISCOS Ltd. Most of you will have seen examples of Justin and Matthew's previous work, but I'll come to that later.

The simple office contains three fairly orderly desks, plus several test benches and work surfaces. At one end lie the two programmers' desks, with Andrew's situated at the opposite end of the room. Andrew has taken on a managerial role within the team because of his experience as project manager for many R-Comp and R-Comp Interactive (RCI) releases, hence the separate desk.

Before proceedings got underway, I was treated to a quick game of *Doom+* over the office network against Justin and Matthew. My regular readers will be pleased to hear that I showed them a few tricks and was first to five twice in three games.

Each desk is equipped with similar hardware. As you might expect, each has a high-powered Risc PC with 19" monitor and those lovely cushioned mouse mats (see box for full machine specs). The presence of a rather meaty PC box was also noted on each desk, although except for the backup machine, these were all turned off. The Risc PCs are essentially just clients used for typing and compiling the code, the code changes are logged by a system known in the trade as CVS, this prevents either coder working on an out of date copy of the source. However, the actual ROM build will take place on a Risc PC. All the Risc PCs run the latest RISC OS 4 builds for real-world testing.

All the usual small office peripherals are present, including a laser printer, scanner and fax machine. Andrew took great pride in showing off the 'infeasibly large server' which takes care of the office LAN. The team also seemed quite chuffed with the office phone which, as if by magic, was able to transfer a call to the other side of the room at the press of a button.

## The people

The upgrade has been put together by a team of three working full-time, plus several part-timers and freelancers, at the secret HQ. Each member came from a different part of the country, so it was decided that they should all come together at a central location.
A Midlands site was chosen, primarily because of the availability of cheap office space at an Acorn-friendly company, and secondly to signal a move away from the traditional Acorn Cambridge way of doing things.

Andrew, Justin and Matthew had previously worked together on games for R-Comp Interactive. However, they've never worked under the same roof as their work can usually be completed and submitted to Andrew by e-mail.

All three now share a house about ten miles from the office and commute to work daily. Apparently, the team had great difficulty in persuading the estate agent they weren't students when it came to renting the house, despite the suits, business cards and other trimmings of young executives.

Sharing a house with work-mates might not seem like a very appealing idea at first sight, you end up seeing the same two people all day every day. Fortunately, the three RISC OS bachelors still seem to be getting along very well with each other, even though they have been together for around two months now.

On the subject of the team's evening activities, Andrew uttered: *'It's pretty jovial, there's usually an MP3 track playing in the background. Most evenings, a game of network Doom is played. So yes, it's generally a very relaxed atmosphere'.*

The MP3 (a popular compressed sound-file format) thing doesn't just stop there either. The office server has many free tracks stored on it, and additional music comes courtesy of the team's CD collection. The music was generally of a high standard, Meat Loaf [high standard? – Ed] and Beautiful South [Yes!] albums were noted, along with offerings from other less mainstream groups. Some people will be pleased to hear that the team have acquired a rather speedy MP3 player module which might just be included with the final release of the operating system.

While on the subject of music, Andrew drew my attention to the following: *'The official music of the RISC OS 4 source was Tubular Bells 2. It was playing all the way back from Cambridge at 11pm at night in blinding snow when the deal was finally done after 6-7 hours of negotiating'*

At the time of the interview, each team member was working from about 9am until 7-

## Benchmarks

Source: RISCOS Ltd

| Test | RISC OS 3.7 | RISC OS 4.0 | Improvement | Comment |
|---|---|---|---|---|
| ArmSI speed index4 | 3.512 | 55.269 | + 27% | Tests processor performance |
| Doom+(smaller the better) | 9536 | 7102 | + 34% | Single tasking game, not regarded as OS dependant! |
| Web page render | 1.60s | 1.08s | + 49% | Internal server home page |
| Desktop responsiveness | Although not quantifiable, desktop appears around 40% smoother | | | |

*Please note that in tests, ARM 610/710 users observed much larger improvements, especially compared to RISC OS 3.5 or 3.6.*

8pm with slight variations from day to day. The three share lunch in the local Tesco store and discuss progress as well as social matters. These hours will probably increase as the deadline approaches but hopefully the team will remain sane throughout.

Andrew also commented: *'For fun, we like to catch Red Dwarf, and I personally watch the good movies on Channel 5 and of course enjoy the odd bit of gaming if I have five minutes, but that hasn't happened a lot lately.'*

Andrew's comments are echoed by the other members of the team who paint a similar picture of a RISC OS bachelor life. They are all keen to stress that work is generally kept to the office and other projects including those outstanding for RCI are taken care of at home in the evenings.

Justin Fletcher is a lively character, and from what he tells me I understand he's fulfilling a dream by working on RISC OS. He had wanted to work for Acorn themselves but now, perhaps, he's doing the next best thing. He told me all about how it is possible to judge a programmer's skill by the number of comments they use. Initially, they tended to fill every other line with comments but then it tends to level out at an acceptable quantity. However, Sophie Wilson of Acorn, who did a lot of work on ARM BASIC, felt she was so good there was no need to even leave spaces in her code. For this reason – and this reason only, you understand – Sophie is Justin's idol.

Matthew Bullock is also talkative, but is the quieter of the three, at least while I was there. He wrote the freeware *3D Patch* utility, and converted the PC game *Heroes of Might and Magic II* for RCI. Matthew is mostly working on the Filer, FileCore and also the Window Manager due to his past programming experience.

So, it would appear that the working conditions are rather ordinary, the people are also fairly normal, and their habits are those that would be expected from any group of programmers in their situation. Well then, 'why the article?' I hear you ask. Well, now I'll tell you a little about the upgrade itself.

## The upgrade

It would be fair to say that RISC OS 4 is the most radical upgrade to our operating system since version 2 appeared way back in the late 80s. It signals an important change in direction for the whole platform.

Not only will RISC OS 4 give large speed increases on existing hardware, but a lot of thought has gone into its development. Rather than isolating themselves from the outside world, RISCOS Ltd have been taking note of people's suggestions and have incorporated many minor features which users requested. Of course, it's also the first primary operating system for Acorn machines not entirely written by Acorn themselves, and this is perhaps the most significant achievement.

It may surprise some that the source code for RISC OS is about 250Mb raw, but fills several gigabytes when all the code changes are logged using CVS. The operating system is largely written in assembler, with some of the more recent stuff in C. There's also a bit of BASIC in there too for good measure.

As with all versions of RISC OS, Andrew and the team will be leaving a little bit of themselves in the code. In v3.5 and above, clicking 'menu' four times over the author field in the task manager's info box will reveal a hidden scroll text. Andrew wouldn't let on what this team's little 'feature' would be but apparently, it has to do with the cult TV show, *Buffy The Vampire Slayer*. Major changes

*Two of the senier programmers; Mathew (left) and Justin (right)*



include: Massive performance increases. On average RISC OS 4 is 30-50% faster than RISC OS 3.7. New filer and filecore support long filenames and as many files per directory as reasonably necessary. LFAU (large file allocation unit) is implemented, meaning that up to 30% more free space can be created on large hard drives with lots of small files. The popular 3D window patch by Matthew Bullock has been incorporated into the operating system. Screensaver support has been increased phenomenally, with support even planned for some third-party saver formats.

More applications will be bundled with the operating system. These will hopefully include a basic word processor with ability to read/write *Microsoft Word 6/7* files. CDFS will be updated to include DOS file extension mapping by default in a similar way to current ADFS drives.

Time was spent trying to secure *PhotoReal* printer drivers for the release, but due to the small size of the market, it was deemed unfeasible to produce a new set for the operating system. However, a minimal Internet connectivity suite will be included, along the lines of that seen in *Windows '95* and higher.

The so-called CDFS 3 which Acorn were well on the way towards completing has unfortunately been abandoned in this release due to compatibility problems with existing drives. Instead, the existing CDFS has been improved to tide us over until the next version.

Many other smaller changes are planned, Andrew has very firm beliefs on how the final product should come together: *'RISC OS has always tended to be lacking in the niceties, it's always had very good guts and a very good core of an operating system, but Acorn only ever seemed to go 90% of the way and never bother to polish it off. In Windows, they tend to do all the polishing but don't actually write an operating system to go under it'*

Andrew also points out that when an operating system is a company's key product, it is important that it has a nice appearance and lots of nice features, because people won't have meaty hardware to sway their buying decision.

## The future

RISCOS Ltd are keen to stress that their work will not stop with the release of RISC OS 4. Provided they make enough money to stay afloat from sales of the upgrade and also memberships to the RISC OS *Foundation* 'fan club', further improvements to RISC OS 4 will be released. Hopefully, a fully 32-bit version of the operating system will be released sometime next year. This will cater for new hardware which will not necessarily rely upon the standard Acorn VIDC display chip and other proprietary hardware, and will also work with the newest ARM processors.

RISC OS 4 will include support for intermediate upgrades supplied on disc and soft-loaded in a similar fashion to current development versions of the OS. This means that once a user has the version 4.0 ROMs fitted, upgrades will be possible at a far lower cost than that of full set of new ROMs. The whole core operating system will be remaining on ROM chips for some time to come, primarily for ease of use. A machine which has a ROM based operating system does not, in theory, need any sort of disc at all to start up.

## To conclude

Prior to my visit to RISCOS Ltd, I was somewhat sceptical as to how efficient the programming effort would be. However, the things I saw and heard on that day assured me that RISC OS does indeed have some sort of viable future as a home, business and educational platform, and that future is bright and in more than capable hands.

New hardware will be needed soon though, but you will hear more about that in the coming months. If you're reading this at the Wakefield show, there may well be a few hardware-related surprises dotted about the show for you to enjoy.

## Thanks...

Big thanks go out to all at RISCOS Ltd for their cooperation, namely Andrew Rawnsley, Justin Fletcher and Matthew Bullock. I'd also like to thank Richard Goodwin for his help with the interview questions, and finally my good friend James who lent me his Psion Series 3c.

END

## The People

### Andrew Rawnsley

Date of birth: 13th October, 1977
Hometown: Knutsford, near Manchester
Programming languages:
Primarily C. I started out writing in BASIC, but soon realised that if I wanted to achieve anything fancy, I'd need to be using C. I've also done a bit in Java and Pascal, although not much. Recent involvements have led to a fair knowledge of JavaScript. I've also done work in several scripting languages, and of course, my HTML isn't too bad either.
Past programming experience:
HTMLEdit v1 – 4+, Web Designers Toolkit, several other RCI utilities. I've never really been much of a PD coder – I always felt that if I was going to write a program, I wanted to do it to the best of my ability, and that meant spending months working on it, and I kind of like a little recompense for that.

### Matthew Bullock

Date of birth: 3rd September 1976
Hometown: Bedford
Programming languages:
C, C++, various assemblers (ARM, x86, Z80, 6502, Z8 and some other rather obscure ones) BASIC, Visual Basic, QBASIC, COBOL, Lisp, Forth, Fortran, Pascal and a few other odd ones.
Past programming experiences:
Lots of dodgy patches for RISC OS including 3DPatch, Pinboard ROM patch, windowdragfix and a bunch of other ones. Quite a bit of stuff for R-Comp including PNG and JPEG image converters, Syndicate, HoMM2 and some stuff on Abuse for the NC.

### Justin Fletcher

Date of birth: 17th September, 1976
Programming languages:
Procedural: BBC Basic, QBASIC, GWBasic, BywaterBASIC, C++, Pascal, Prolog, Perl, Logo, Tcl/Tk, Lisp, Java, CLIPS
Functional: Miranda, SML
Assembler: ARM (ObjAsm/JFPatch), 6502 (BBC)
Shells/scripts: csh, bash, mmta
Silly: Reptol, WW+, Zap
Past programming experience:
Commercial: Doom+, Heretic and Hexen.
Freeware:

- Ports: Pine/Pico (partial – pico works fine); CLIPS (programming language); HTMLTidy (David Raggett's Tidy program)
- Re-implementations: IRServer (the only RISC OS IRC server); DrawPlug (the first freely available RISC OS plugin outside Acorn); MimeMap (freeware implementation of ANTs module); GMail (most powerful RISC OS CLI mailer); Forecast (updating JPEG fetcher); LPRd (configurable line printer daemon); SysLog (remote logging system); EDict (generic RISC OS Dict server); DNServer (the only RISC OS DNS server); TelnetD (simple telnet server)
- Original:
  Programming: JFShared (BASIC programming library); FormEdExt (extensively improved version of FormEd); ESockets (simple internet socket interface); IServices (simple internet services database)
  Internet: JFinger (cool finger client); JFTerm (generic line-based ANSI-colour terminal/talker/IRC client); JFProxy (generic proxy); MyRC (simple 1 day desktop IRC client); TalkerD (simple talker); NetOXO (o's and x's over the internet); NetC4 (connect 4 over the internet); WimpCTCP protocol and apps (generic IRC extensions); Imagen (the first RISC OS image map editor)
  Utilities: ExitOut (easy way to prevent shutdown); DDA (Dynamic Areas for pre-RISC PCs); RecErrors (Wimp error message recorder); SquigglyPipes (unix style CLI piping); ReformC (reformats C code for publication); MP3Encode (front end for CMPA); MP3ID3 (desktop ID3 editor)
  Colaboration: RealAudio (from free source, with Kira et al); MakeARPC (fantasy RPC, with David Thomas)

# Touch of Class

## *Stephen Scott compares two recent clip-art compilations to help you add extra polish to your work...*

We can't all be great at drawing and designing. Some of us just want to knock together an image or poster in a short space of time, or add visual spice to a text laden report or dissertation without too much effort.

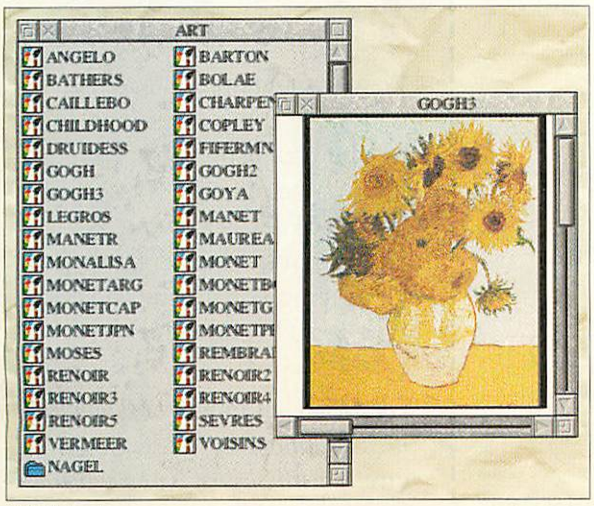
In answer to this need, companies have produced clip art discs containing hundreds, perhaps even thousands of bitmap and vector images, suitable for third party use and free of copyright. Two recent additions to the RISC OS market are PublishArt 98 from SmartDTP, and APDL's Clip Art CD 4.

PublishArt is Windows compatible, whereas Clip Art CD 4 is specific to our platform. PublishArt 98 is the latest in a yearly line of clip art discs from Smart DTP. Discs such as these, containing so many files (around 6500), need to be clearly categorised and easy to navigate. PublishArt uses an HTML interface to give you a general overview of the disc's content.

Part of this interface is a help and hints guide, explaining how the clip art can be used. Clip art is divided between DTP based work and Internet specific bitmaps. The images range from symbols to newsletter templates, icons to figures, backdrops to stencils. The collection is very design oriented. APDL's offering, on the other hand, offers a range of more situation-based graphics, as well as design and illustration artwork.

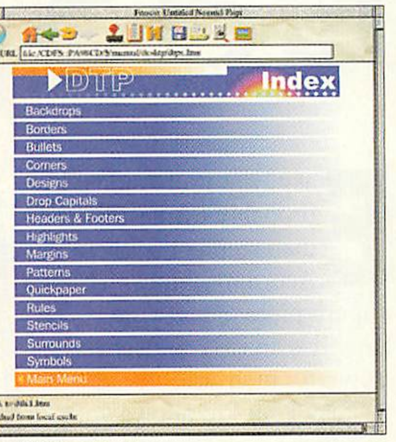
The APDL disc is a well-structured affair, offering the user three ways of browsing through its content. By far the best way is the supplied *CDView* software. This acts as a Filer, allowing the user to double-click on folders, until the required file is found. Double-clicking on any file displays a simple thumbnail in a window. The viewer can show sprites, drawfiles and Artworks files with no trouble. This is altogether a less time-consuming affair than having many programs loaded up for uncompressing and displaying a file, only to discover it's not the one you want.

Alternatively you can look through the large text file which details every image on the disc. Using the search facility common to every text-editor, the user can quickly browse for the kind of image that they want – the files are quite sensibly named.




*APDL's interface*

The range of images is very extensive, and has been collated from a wide range of sources. Food, drink, transport, medical diagrams, sport, buildings, and many more categories are there for the taking. The quality though, is varied. But delving deeper yields rich rewards, such as various Artworks files by Christopher Jarman,




*SmartDTP's main menu*

colourful and intricate in their detail. Some of Jarman's work is also on the PublishArt CD, so you can't go wrong on either disc if you are a fan of his work.

Most bitmap images were black and white only. Some had the distinct 8-bit, bulletin board feel to them – rather pixellated, restricting their use to screen-based work.

So, are the discs really worth their asking price? It is difficult to critique the overall quality of these products, as discs of this kind will offer something for everyone. The question is whether such resources can be relied upon time and time again. Ease of use is also part of this equation, and the APDL offering has by far the best approach.

If you're looking for an image bank, APDL's product may be for you, while Publish Art98 caters more for those with design in mind. You may find you end up buying both.

For schools sharing PCs and Acorns, PublishArt is the better solution as it is Windows compatible, and offers a free site licence. APDL also offer a site licence in return for a modest fee. But in conclusion, the APDL disc has the edge in quality, usability and value for money. **END**

### Product details

| | |
|---|---|
| Product: | Clip Art CD 4 |
| Price: | £19.50 |
| Supplier: | APDL |
| Address: | 39 Knighton Park Road, Sydenham, London, SE26 5RN |
| Tel: | 0181 778 2659 |
| Fax: | 0181 488 0487 |
| Web: | http://www.apdl.co.uk/ |
| Product: | Publish Art98 |
| Price: | £19.95 – Launch price |
| Supplier: | SmartDTP |
| Address: | 36 Park Road, Duffield, Belper, DE56 4GR |
| Tel: | 01332 842 803 |
| Fax: | 01332 842 803 |
| E-mail: | Parrygroup@intecc.co.uk |
| Web: | http://www.intec.co.uk/users/parrygroup/ |

# Easy Font Professional

Easy Font Professional is probably the best Font management software on Acorn machines. This superb piece of software provides an easy to-use, yet powerful interface.

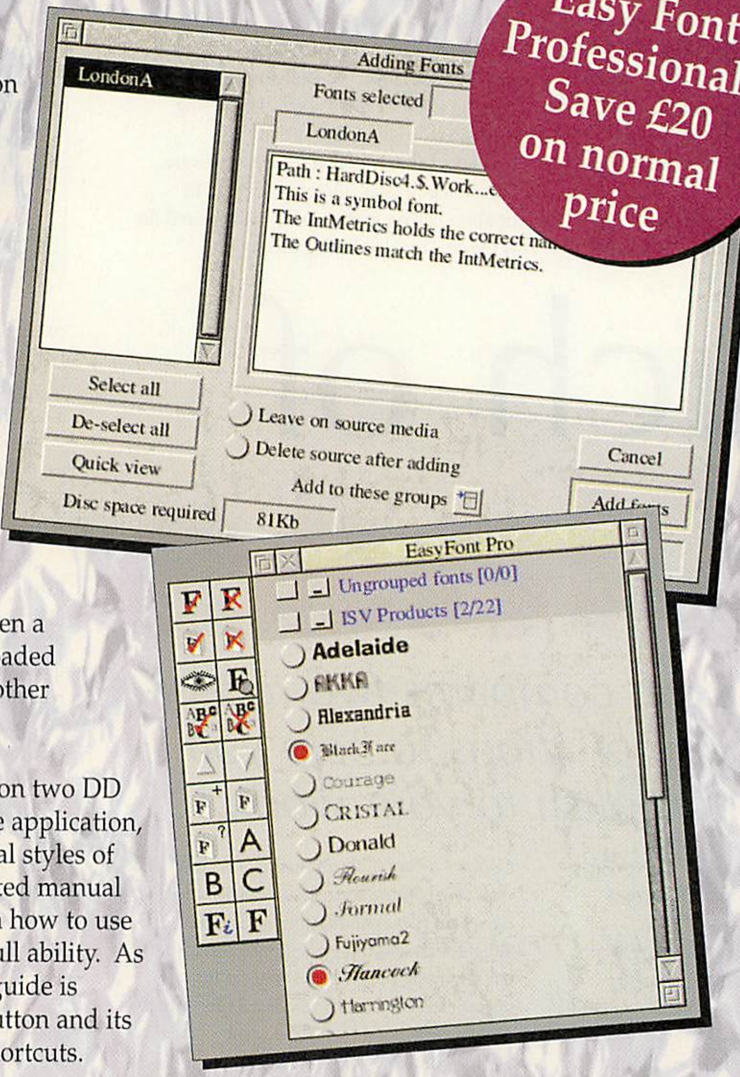
Easy Font Pro allows you to add fonts easily and quickly, as well as allowing the fonts to be viewed for simple selection.

Other features of Easy Font Professional include:

- The ability to allow you to group fonts.
- Up to 40% compression
- Fonts which load only when a particular application is loaded
- Fonts can be accessed on other media, eg. CDs

Easy Font Professional comes on two DD floppy discs. One contains the application, while the other contains several styles of font. It also comes with a printed manual which contains instructions on how to use Easy Font Professional to its full ability. As well as this a quick reference guide is included which shows each button and its function, plus the keyboard shortcuts.

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## Font Pack

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*For Easy Font Professional you will need a minimum of RISC OS 3.1 or greater with 2Mb of RAM and a harddrive*

# Calling functions by pointer

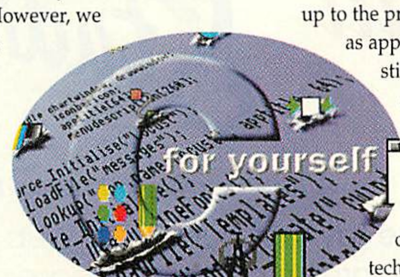
*Steve Mumford looks at the details*

This month I'll be investigating pointers to functions, and explaining some of the reasons why they can be particularly useful, especially when developing the shell of an application. Obviously, whenever pointers are mentioned we know we'll be referring to blocks of memory. At this stage we should be comfortable with the notion that if, for example, an array **a[20]** has been created, the value of a on its own gives the starting position of the array in memory.

We've been using that feature to pass the addresses of memory buffers to the OS when making SWI calls, but given this start address, it's also possible to access array elements by memory offset.

Functions can also be thought of as blocks of memory and, although their contents aren't editable, it's still possible to call the function concerned if you know its starting location. By using a pointer to store the starting address of a function, we can call that function without needing to know its name. In this way, we can create a link to a procedure that can be changed as many times as we want during the execution of the application.

In order to determine the start address of a function, we use its name without any brackets or arguments, in exactly the same way that we find the address of an array block. However, we still need to create a pointer variable to hold this information, and that's not quite so straightforward. The syntax might look a little confusing, but it does make sense once you understand where the components come from.




In fact, it's very similar to the format we use when we're prototyping functions at the beginning of a program – here's an example. For the function shown below:

```
int func(int x, int y) {
return x + y;
}
```

the function pointer declaration would look like this:

```
int (*funcptr)(int, int);
```

The brackets around ***funcptr** are required to stop the C compiler from working itself into a frenzy. Other than that, you can see that it is indeed very similar to the actual function prototype, shown below:

```
int func(int, int);
```

Once you've declared the function pointer in this way, you're free to use it as you see fit. Here's how we'd call **func** using the above function pointer:

```
funcptr = func;
result = (*funcptr)(1, 2);
```

It's even possible to make use of these pointers as formal parameters within a function definition, meaning you can write a procedure that accepts the name of a function along with its other arguments.

So why are function pointers useful? You could be forgiven for thinking that they add an unnecessary complication to the whole process of writing a program. It's true that pointers always add an extra layer of complexity, but very often the controlled inclusion of pointers can give you more freedom in just how you structure your code.

Up until now, functions have always been static objects – we can decide whether or not to call them by using standard C decision statements, but that's about the limit. By accessing our functions with pointers, we can start using them in many different ways – for instance, you can bring shades of C++ programming to your code by associating particular functions with data objects.

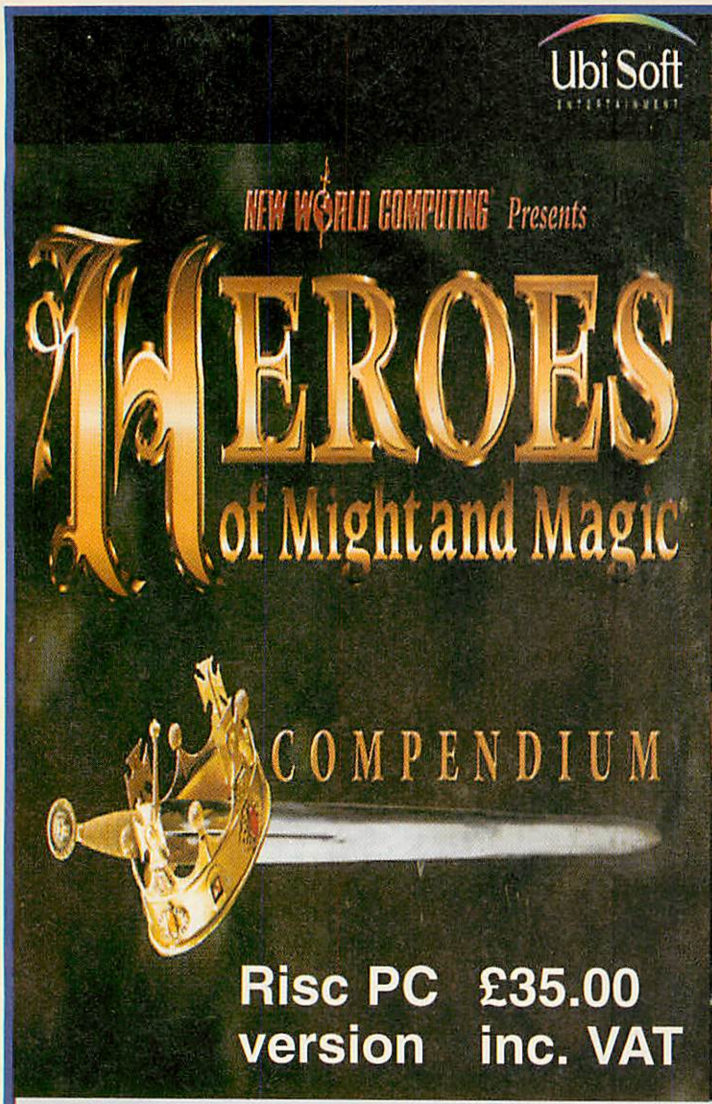
In our case we have a particular problem to solve – we've started writing a library of routines designed to make the programmer's life a little bit easier. However, these routines can't be included automatically, and it's up to the programmer to build them into his or her code as appropriate. In this situation, the programmer still ends up doing a lot of work from scratch, and it would be nice if this workload could be minimised.

One method might be to include a pre-written core program containing all of the basic features of the WIMP, which coders could then add to and modify. Using existing techniques, there has been no easy way of adding functionality to an older application, short of modifying the existing source code.

Now that we can use pointers to functions, the situation has changed somewhat. We can use these pointers as placeholders, referring to a generic function that performs a simple version of the task until the programmer replaces it with a more complete routine. For instance, the application kernel could contain basic window redrawing routines that capture the appropriate WIMP messages and deal with the moving, opening and closing of a window.

These would suffice until more intricate graphics were required, and at this stage a new redrawing function would be registered to take the place of the existing one. Without pointers, this would have required a change in the source code; with pointers it could be done on the fly. There are quite a few more applications for function pointers; I hope you find them useful. See you next time.

END







RComp

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# Going for Green

*Alasdair Bailey gives the low-down on the latest and forth-coming games releases*

This month's Game Show is a bit of a mixed bag, there's updates on a number of exciting projects along with news of what's at the Wakefield show for gamers, plus a final look at *BotKiller 2.*

## Show news

By the time you read this you'll probably either be at the Wakefield show or back at home wondering why you missed it. I won't go into the particulars of the show itself because I'm the games writer, someone else has to tell you about shows. I'll just tell you about all things gaming-related at the show.



*More little men with funny faces are on the way!*

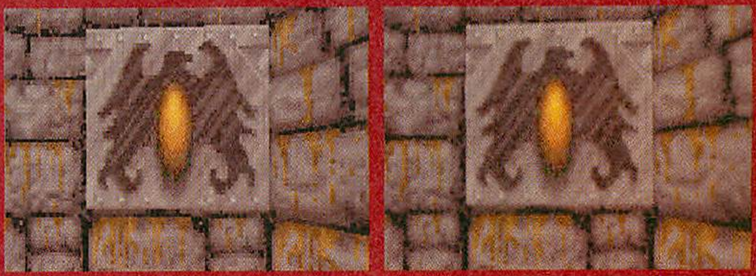
Sadly, R-Comp have no new game conversions to launch, but they will be present selling all their titles along with a couple of upgrades if we're lucky. The long-overdue *Doom+* bi-linear filtering upgrade should be available to existing users, as should the new expansion pack for their excellent *Heroes of Might and Magic 2* conversion. Bi-linear filtering was present in R-Comp's *Hexen and Heretic* releases which were reviewed last issue. But in case you were terribly ill and unable to buy a copy, bi-linear filtering is a method of smoothing wall and floor textures, along with anything else you might fancy, in order to eradicate that horrid pixellation which occurs when close up.

The new *Heroes of Might and Magic* expansion pack, *The Price of Loyalty,* will also be available at the show, and although I haven't seen the enhanced game in action yet, it's sure to add many more hours of fun to an already addictive game. *Heroes of Might and Magic 2* was reviewed by Steve Mumford in the January issue, but this new add-on should create a whole new experience. The pack contains four new campaigns, each containing many new buildings, items and heroes, along with features to allow for more structured gameplay. The add-on should retail for around the £20 mark and, although it sounds like a lot for some extra levels, it should be well worth it.

Although R-Comp have nothing radically new at the show, there is still more in the pipeline. Andrew Rawnsley, R-Comp's front man and business partner is currently looking into converting a PC real-time strategy game which I can't tell you about just yet. Suffice to say, this title was very popular on the PC so it should be yet another fine conversion when we see it on the Acorn side. R-Comp are also working on converting not one, but three flight simulations. More details will be available in coming months, but it's good to see some flight sims are on the way when the last one we saw was *Star Fighter 3000.* Artex Software will be travelling all the way from Germany to be present at the show. Copies of *Exodus, Ankh* and the recently released *BotKiller 2* will be available, along with team members who will be willing to chat about Artex's work on the Acorn platform. Their new real-time strategy game, *TEK,* was initially due for release at the show but it's unclear at this stage as to whether it will be or not. It is possible

### Bi-linear Filtering

**Notice the smoother overall appearance of the wall detail when the filtering is turned on.**



*Without filtering* / *With filtering*

that Artex will be taking advance orders for the game at the show but I doubt it will be ready for you to take home. Whatever happens, Jan Klose has promised not to let us down, and there'll be a couple of machines present to demonstrate *TEK's* current state of development.

Tau Press will be present at the show, selling copies of the new CD version of *Destiny*. The game, originally released back in the summer of 1998, was fraught with bugs, and the initial Internet reviews weren't too pleased with it at all. However, since then, Robert Templeman has found time to tidy the game up and improve the graphics in time for a CD release. I won't be reviewing the game here for obvious reasons, but if you'd like to read a review before buying, check out either of the main Internet gaming sites; there's a full review on Acorn Arcade at http://www.acornarcade.com or alternatively take a look at Gareth Moore's Acorn Gaming site at http://www.acorn-gaming.org.uk.



*A mock-up of the ChiBER hardware*

APDL will be launching a number of new CD-based game compilations at the show. Keep an eye on this column for more news and reviews of all the Wakefield releases.

## Questions

A number of readers have been sending me questions lately with regard to the future of the games marketplace as we now know it. For example, Harry Decker of Nottingham writes:

*"With the cancellation of Phoebe, do you think the Acorn gaming scene has a future? What new hardware is there on the horizon to take Phoebe's place?"*

Sadly, I don't think that the gaming scene can have any viable future unless new hardware appears soon. Having said that, we have yet to see any native title take the StrongARM to its true limits. Perhaps *Iron Dignity* will show us what this platform capable of but it doesn't look like that will go on sale before the end of the year. There are a couple of other home-grown games on the way, all will be revealed in the coming months.

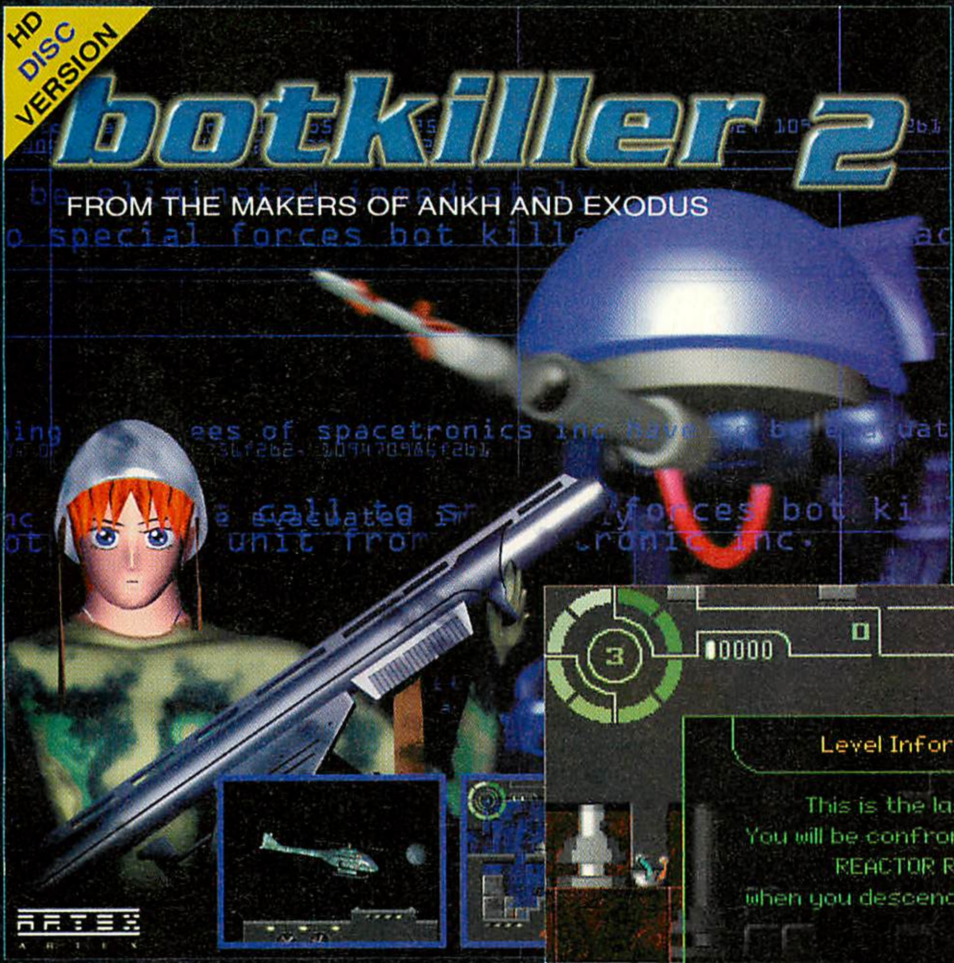



The next major hardware development may well be the Risc PC motherboard upgrade from Millipede. If done properly, this could effectively give us a Phoebe in a Risc PC's box. Sadly, the ChiOS project to put a variant of RISC OS and a StrongARM processor inside an off the shelf PC has been shelved after a major beneficiary was forced to withdraw from the project. It's early days yet, we're just going to have to wait and see what materialises.

Another query a couple of people have sent me concerns the original version of *Doom*. James Dean from my home town of Leicester survived the car accident to write:

*"When I load DOOM, it occasionally quits while looking at the WAD file with the error 'Template magnifier not found', what am I doing wrong?"*

Well done, you've discovered one of the little quirks present in *Doom* which was fixed by the *Doom+* upgrade. It happens when another program starts up or plots some windows while *Doom* is initialising. You can quite simply work around it by not using the computer while *Doom* starts up. If you have any questions, no matter how trivial, don't hesitate to get in touch with me at games@acornuser.com or by snail mail via







*A level briefing*

the usual editorial address. Although I will endeavour to reply to all questions, I can't promise to publish everything you send.

## BotKiller 2 Revisited

After my review of a slightly pre-release version of Artex's new platformer in the April issue, the team have been hard at work and an even better version has just landed on my desk. The game was due for release way back in February, but unfortunately the person employed to do the sound effects was involved in a car accident which delayed proceedings somewhat. Anyway, the game is now finished and it's looking quite a bit better than before.

Level design has been greatly improved, and a very nice difficulty curve now exists, along with some later levels which will tax even the most skilled games player. The very prominent puzzle-solving angle still exists, something which brings a very welcome break from slaying robots. No new in-game elements have been added, but those that were present before have been utilised rather nicely. End of level baddies are now present in the release version and, as with all titles, they add a nice twist to the game. More scenery has been added, giving levels a much nicer look and feel.

The in-game shop has also been improved. Details of your current armoury are displayed, so there is no need to flick back into the game to decide what to buy. A shop is also available on almost every level now, something I recommended to the team after seeing the initial version.

Character animations have been improved, but unfortunately my criticism of the slow speed of movement still stands. A nice dying animation, along with improved menu and title screens have also been added and everything comes together very nicely now. *BotKiller 2* should be in every platformer addict's collection, and at a price of £15, non-believers can't go far wrong either. END

### Product details

| | |
|---|---|
| Product: | BotKiller 2 |
| Price: | £15 (including VAT and P&P) |
| Supplier: | WAG Software, 5 Queens Close, East Markham, Nr Newark, Notts, NG22 0QY |
| E-mail: | richard@wilsontigger.demon.co.uk |
| WWW: | http://www.wilsontigger.demon.co.uk/ |

# Free Ads

- SA RPC 600, 203Mb HD, 5+2Mb RAM, 17in colour monitor, Turbo Driver, MIDI interface, *Impression*, 100 "look" fonts. £700 ono. Tel: 01691 780 452 (Shropshire) Lesley Applebee
- Inherited A3010, VDU, printer, mouse - need manual. Tel: 01386 861 306 (Pershore, Worcs) A C Osman
- Acorn Electron, disk drive, tape drive, printer, ROM drive, software, manuals, cables, monitor, magazines. £100 ono. Tel: 07788 968 224 (Herts) 7pm – 10pm. Peter Mayne
- A3000, RISC OS 3.1, 2Mb RAM, colour monitor, VGC. £110. Tel: 01372 815 184 (Surrey) D Goodrick
- RPC700, 17Mb RAM, 450Mb HD, 17 inch monitor, PC card, CD-ROM, lots of software, excellent condition. £700. Tel: 01652 654 274
- Urgently required: serial port upgrade kit and anything econet, both for my faithful old A3000. Also in search of a HD. Any donations gratefully received as I am a poor student with a passion for Acorns. Please Tel: 01722 326 731 (Wilts) Richard Godwin
- RPC600, 20+2Mb RAM, 540Mb HD, CD-ROM, scanlight 256, speakers, lots of software and games including *OvationPro*, *ArtWorks*, *Personal Accounts4*, *SimCity 2000*, *Exedos*, *StarFighter 3000*. £700. Tel: 01923 779 141 (Watford) Andrew Dickinson
- A3010, 2Mb RAM, AKF52 monitor, Epson LQ100 printer – original boxes and manuals, software, excellent condition. £200 ono. Tel: 01299 270 746 (Shropshire) Ross
- Software for sale: TurboDriver for Cannon BJC800 including fonts disc, cable, etc, £20; *Genesis+*, £10; *CableNews* presentation package, £15; *Tabs 3D net design package*, £15. Tel: 01953 681 684 (Suffolk) Mike Bailey
- A3010 learning curve, 80Mb HD, monitor, plenty of software (games + utilities). £125. Tel: 01395 514 069 (Sidmouth, Devon) David Pilkington
- Acorn hardware and software, both 8-bit and 32-bit range: games, utils, business, DTP. Plenty of BBC's with DFS, A3000's and upgrades available. Tel: 0151 637 0993 (Wirral) K Swift
- Please help me I am a student with a keen underlying interest in Acorn computers, but I have no money. I am down on my hands and knees begging for any software or hardware that you want to donate. Please Tel: 01722 326 731 (Wilts) Richard Godwin
- SA RPC 233, 37Mb RAM, 1.7Gb HD, 24xCD-ROM, x586 PC card (software+DOS7). £750 ono. Tel: 0151 928 8207 (Liverpool) Alan Church
- A3000s and A3020s for sale. All with 4Mb RAM, RISC OS 3, monitors, SCSI cards and in perfect condition. A3000, £100. A3020, £150. Also A3020 bits: 4Mb RAM, £20; keyboards, £20; disc drivers, £15. Tel: 01953 681 684 (Suffolk) Mike Bailey
- A3000 RISC OS 3.11, 4Mb RAM, 80Mb HD, manuals, software including DTP and clip art, monitor, printer. £150 ono. Tel: 01425 279 7474 (Dorset) Mr Wilson
- SA RPC, 20+3Mb RAM, 2Gb HD, 8xCD-ROM, DX4-100 PC card + *Win95*, PMISO MIDI, AKF60 monitor, *ArtWorks* CD, *Ovation*, *Midiworks*, *Rhapsody3*, games, £700 ono. Tel: 01487 843 637 (Cambridgeshire) in evenings. C Sinnett
- Wanted: Lemming Tribe software for use on A3000, can anyone help please. Tel: 01934 521 886 (Somerset) after 18:00hrs. G Burton
- ISV 'Penulator' graphic pen, complete Acorn/PC software, hardly used, original box. £18. Tel: 0181 579 2652 (daytime), Tel: 01494 875 492 (evenings) G Greenfield (Bucks)
- RPC600, 16Mb RAM, 420Mb HD, 2xCD-ROM, 2nd slice, no monitor. £300. A5000, 4MB RAM, HD, monitor, etc. £175. Epson stylus 800 mono printer + turbo driver. £55. Tel: 01268 734 215. Max
- A3010, 4Mb RAM, 256Mb HD, CD-ROM, monitor, complete set of 3.5 inch cover discs, Acorn mags from 1980's to present day. £400. Tel: 0191 565 4024 (Sunderland) Robert
- A5000, 4Mb RAM, 428Mb HD, Floating-Point Accelerator chip, RISC OS 3.11, manuals, boxed, some software, used at home. £190. Tel: 01276 65 512 (Camberley, Surrey) M Hodgson
- RPC, SA upgrade, 5Mb RAM, *Sibelius7*, Melidi sequencer, other software, keyboard, mouse, monitor. £Offers. Tel: 01460 63030 (Chard, Somerset) G Harper
- *Simcity 2000* £10, *Turbodriver* £10, *Impression Style* £20, *Easy C* £20, *Hearsay* £10, *Pipedream* £10, *Stunt Racer* £10, 500DD discs £25. E-mail: ashcox@bigfoot.com or Tel: 01628 631072. Ashley Cox
- RPC600 with 700 CPU, 48Mb DRAM, 1.2Gb HD, 8xCDRom, 586 133MHz PC card, *Windows 95/98* very good condition £600, also MIDI max card £20, RPC600 CPU card £50, plus lots of software. E-mail: k.rolfe@virgin.net or Tel: 01703 868695
- A5000 80Mb hard drive 4Mb RAM. Mitsubishi BW scanner with motor drive. 14 inch AFK18 monitor. £350. E-mail: mac@cercot.demon.co.uk or Tel: 01423 884466 (Harrogate) Kieron McGeever
- RPC 600 2-slice 24+1Mb RAM, 400Mb HD, CD-ROM, AKF60 Monitor, MIDI Card, 486DX PC Card, lots of software including *Impression Publisher*, *Artworks*, *MS Office Pro* plus game pad and *Simon The Sorcerer*. £650 ono. E-mail: 95tjb@eng.cam.ac.uk or Tel: 01223 276170 (Cambridge) Tim Boughton
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- RPC700, 18Mb, RISC OS 3.6, 812Mb HD, 4XCD, 586 PC Card, 14" Monitor, Ultimate Doom, £500 o.n.o. will pay delivery. Tel: 01224 571894 (evenings). Campbell (Aberdeen)
- WANTED URGENTLY: Low cost copy of Acorn's Toolbox for freeware student programer. All offers please – E-mail peter@everymans.com or Tel: 01743 23 12 48 (Shrewsbury) Peter Price
- RPC 700, 26+2Mb RAM, 850Mb HD, CJE-133 Card, AFK-60 Monitor, £600. E-mail: u6f44@ugf.keele.ac.uk or Tel: 01782 245204. Andy
- Giving away or throwing away *Acorn User*, *Micro User* & *Acorn Computing* magazines. Late 80's & 90's. Tel: 0118 973 0587 or E-mail gordon@soundmasters .co.uk
- Acorn A3010, 4Mb, 120Mb HD, 14" SVGA monitor, Easiword, variousgames and new Acorn boot sequence. 195 ono. Contact Damian on 01225318464 or ee6dflg@bath.ac.uk
- A3000 RISC OS 3.11, 120Mb HD (with spare), 4Mb RAM, 14" monitor, boxed with manuals, software and printer. £175 o.n.o. buyer collects. Tel: 01480 476371 (St Neots, Cambs) A Hynes
- A4000 with monitor, keyboard, mouse, trackerball and powerpad with the game *Burn Out*. £200 o.n.o. Tel: 016973 43518 (Wigton, Cumbria) Alan Gillespie.
- 2 RPC PC Cards 586 133Mhz (CJE) £150 each. 15" Monitor with on-screen menu £50. Tel: 01223 812080 evenings (Cambridge) Peter Rank
- RPC 600, 20+1Mb, 210HD, AKF60 monitor, 2nd slice, 2xCD-ROM, *Publisher*, *ArtWorks*, *Webster XL*, ScanLight 256, Canon BJ-10sx printer & more. £750 ono. Tel: 01744 893392 (St. Helens/Merseyside)
- A310 RISC OS 3.1, ARM3, 4Mb RAM, 37Mb DEA HDD, *Pipedream3*, Acorn DTP, Leading Edge joystick adapter, games, discs, books, manuals, etc. £200. Tel: 01508 578189 (Norwich)

# *Star info

*Dave Acton and Dave Lawrence see how much they can get away with in...*

## A bit of a bender

Author: Mark Adcock

Just when you thought an idea was dead, it's amazing what you can do to bring it back to life. **Mark Adcock** has revamped his *Parallax* demo from the March issue, sprinkled some magic pixie dust on it (now, now, Mark, go easy on that dust), appended the mystical rune '2' onto the end of the name, and knock me down with a greasy spatula if it isn't a whole new submission!

'This is a variation on the old spin-a-sprite-around-and-zoom-in-and-out theme. It has all the necessary features for a *info classic – it's a sequel, it has a silly name and, more importantly, it got to it's current state by a mix of vaguely clever coding, a few went-wrong-isms and some experimenting. It also moves around the screen violently in a very squelchy kind of way, making you feel ill without any resort to colour cycling.'

**Customisations**

*speed%* – between 10 and 20, but you can go higher if you want.

*high%* – If high=1 the plotting routine will use 1x2 blocks (slow Risc PC users might want to take the WAIT out) If high=0 2x2 blocks will be used (Recommended for pre-Risc PC machines)

*cls%* – If low, the routine will only plot non zero pixels. These leave some interesting trails behind.

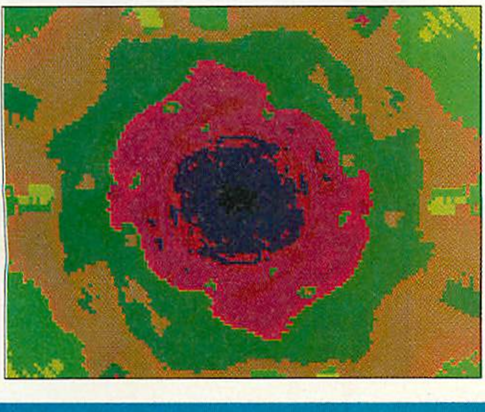
'This started out as a fairly normal, non-zooming, sprite spinning effect. To make it as quick as possible, I interpolated the x and y positions in the source texture across the screen. The zooming was added by mistake when I used the wrong offset in my sine table to get a cosine value for an angle. I'm sure you can spot it. To add the warping effect, I increased the source texture y coordinate by fractions of itself, the y source coordinate, and a constant. What fraction of each you add on depends on a few sine waves in the mainloop.'



## Inner tube

Author: Mark Adcock

**Mark Adcock** has obviously been busy staring down some slimy tubes recently, although quite why that would inspire *Plastun* is anyone's guess. *Plastun* is a real-time plasma-mapped tunnel. The program works by mapping a 64x64 plasma field onto a 256x256 portion of the screen in 2 by 2 blocks.



The program generates a table beforehand which maps every 2x2 block to a source pixel in the plasma field. Onto this, x and y offsets are added, these change at the rate determined by the mouse position: Moving the mouse left and right adjusts the rate of spin, moving it vertically changes the speed and direction of progress down the tunnel.

To darken the plasma towards the center of the screen, the intensity of the plasma is multiplied by the distance from the center of the screen. The distances are stored in the mapping table.

A Risc PC-only, 256 fully definable palette mode is used to make the 2x2 blocks less obvious. The effect looks even better if you stand back from the screen...

# Boom bandit

Author: Mark Adcock

At 10km above sea level, sound travels at 300m/s. An object travelling at this speed is at mach 1, one going 150m/s is at mach 0.5 and so on. For a stationary object (mach 0), the waves of sound that it emits can be shown by drawing a set of concentric circles centred around the object gradually getting larger. The circles usually represent the peaks of the waves, so for a constant frequency they should be equally spaced. For a moving object, the circles bunch up at the front because after the object has emitted one wave, it moves a little bit, then emits the second.

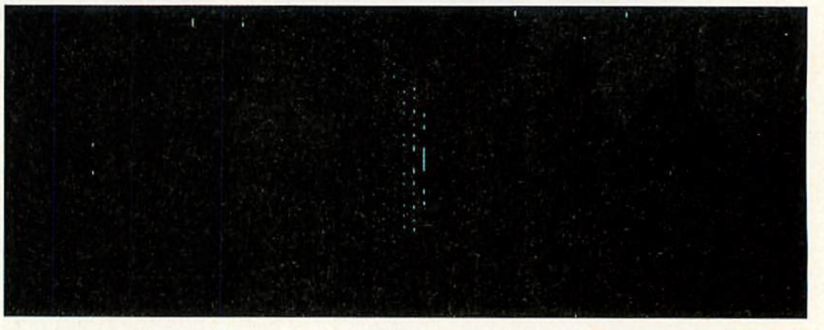
So, rather than the circles having the same centre, they have different centres, causing them to bunch up in front of the object and spread out behind it. If the object is moving at the same speed that the waves spread out at (mach 1) , then the circles all bunch on top of each other, causing turbulence and a loud sonic boom, because all the amplitudes of the waves are added together to create a huge pressure. At speeds beyond mach 1 the object overtakes it's own sound waves so it will pass an observer *before* the noise reaches them.

This program also shows the doppler effect. Because the wave peaks are closer together at the front, the pitch is higher, and at the back it is lower. The noise is higher as the object approaches you, and then becomes lower soon after it has passed you. You can hear this when an ambulance passes you on the street. The doppler effect occurs with other waves, not just sound. Doppler shifting in the case of light and other EM radiation is the main way we can work out how fast other stars are moving away from us, leading to the conclusion that the universe started with a big bang and is still expanding.

Doppler shifting of a star's light is known as 'red shift' because the wavelengths of light get longer and move towards the red end of the spectrum.

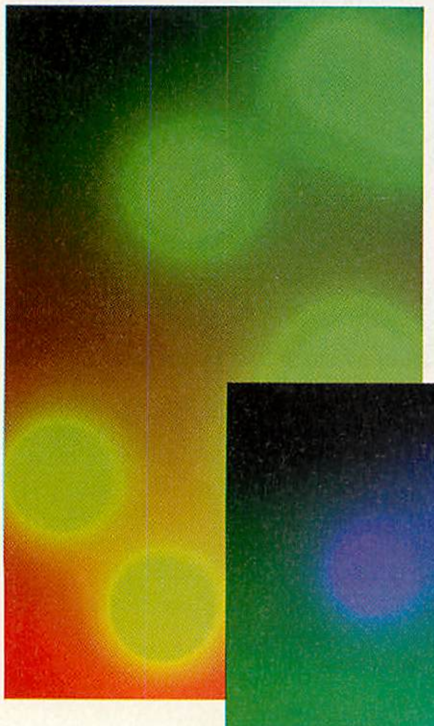
In the program, The object moving remains fixed in the centre of the screen and the ground moves right to left along with the wavefronts. Move the mouse left and right to change the speed of the object.

| Examples | mph | kph | m/s | mach |
|---|---|---|---|---|
| Car | 70 | 112 | 31 | 0.1 |
| Spitfire | 352 | 563 | 156 | 0.52 |
| ME262 | 553 | 885 | 245 | 0.82 |
| Concorde | 1559 | 2494 | 693 | 2.31 |
| SR71 Blackbird | 2206 | 3529 | 981 | 3.27 |



# All in a lava

Author: Alex Waugh



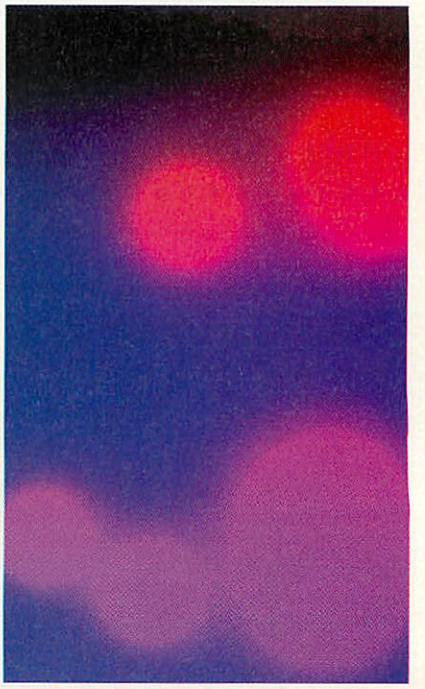


As promised last month we have **Alex Waugh's** *LavaLump*. In terms of realism it scores very highly. In terms of speed it, unfortunately, scores very poorly, and those are Alex's words! It requires 2Mb of VRAM to achieve its 24-bit gooiness and, unless you have a StrongARM, will barely creep along. Run the program and choose what colours to use, green blobs on a red background is particularly blobby.

It works by moving the blobs around, with a slight random influence, and then for each pixel calculates and sums the intensity from each blob as if it were a light source, using the inverse square law. It then uses this to set the colour of the pixel. Only one of the red, green or blue components of the pixel is altered, so the background is left unchanged unless the background is the same colour as the blobs.

Alex said he tried using a lookup table to speed up the intensity calculations, but this only seemed to slow it down (he cannot work out why). We can't really work it out either – surely a single table lookup should be quicker than a division for each of the points for each of the pixels on the screen. But as to exactly how the ins and outs of the SA cache work who can say. If anyone knows and would like to modify the source (C supplied) please let us know.

In the meantime, we have performed a modicum of open heart surgery and produced *Lavalump2* this is identical in every respect apart from the fact it only does a quarter of the resolution and doubles up all the pixels! Blocky maybe but still quite blobby.



# Cubic blues (and reds, and greens)

Author: Jack Peacock

If you thought the most colourful cubical experience to be had was on a rainy afternoon in Hounslow Bus Station toilets with three Croatian seamen, think again. For altogether more wholesome, yet vibrantly colourful entertainment, peruse these files from **Jack Peacock.**

Jack is clearly a well-read student of hue, and supplies a set of drawfiles that will quite literally take your understanding of colour into the third dimensions. *ColorCubeA* and *ColorCubeB* together form the two halves of an RGB colour cube.

You will need the obligatory pair of Blue Peter round-ended scissors, non-toxic glue and quite probably some sticky backed plastic as well. Oh, and a colour printer of course, of which these files will provide a mean test (and be sure to get those flaps nice and sticky or your final erection may well come adrift in your hand). 'Each of the six faces has 256 colour mixes which gives, discounting the repetitions along the twelve edges, the equivalent of 1352 colour blocks showing on the net surface of the cube. The remaining 2744 less pure mixes are of course concealed in the imaginary blocks within the cube, passing through mid greys in the centre.

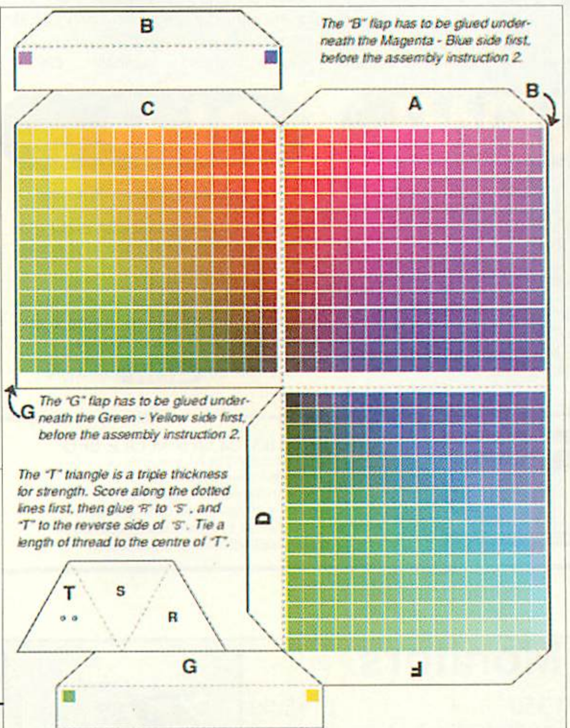
'In order to see the cube at all – let alone print it – you must have the font *Selwyn* immediately available to your System. Even so, you will not see the true colours on screen unless you have a Colour Card or have a machine with a minimum 32 thousand colours available. This is due to the use of 255 values in Text Areas rather than Red + Green + Blue percentages in *Draw*. The reason for this choice is memory – the same two drawfiles created in RGB% would raise the cost from 32K uncompressed to 200K

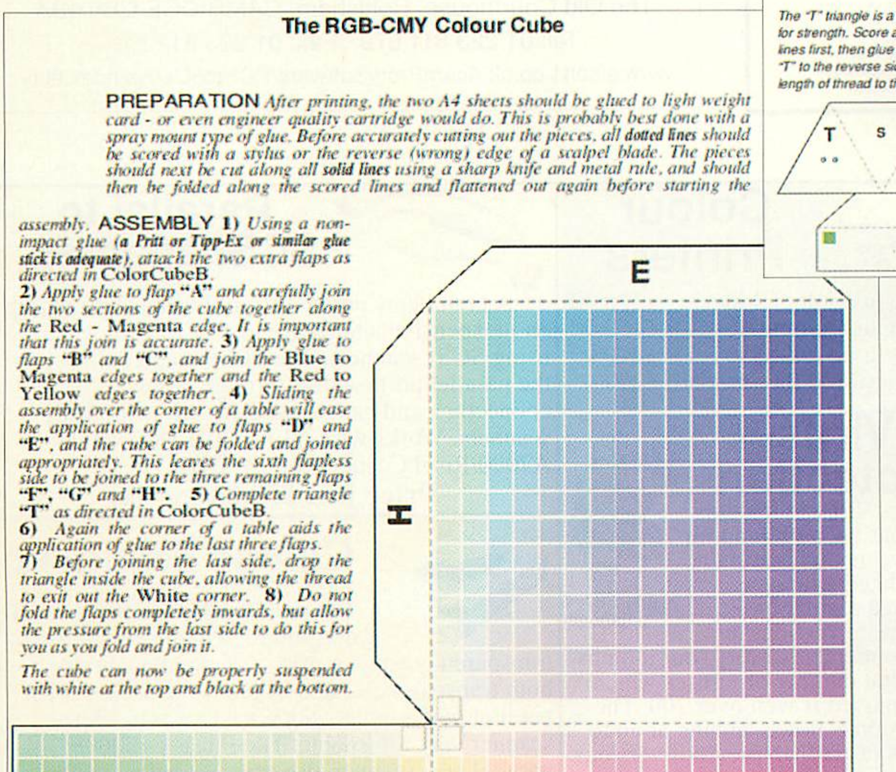
'Note, although the cube faces may appear strangely limited in colour on earlier machines, they should still be handled fairly well by your printer. The exception to this is in interpreting the lightest values where colours approach white. The values have therefore been doctored slightly to give smoother gradation in print, particularly noticeable in the increased amount of yellow in order to compensate for this pigment's notorious weakness in paint or ink mixes.

'If you wish, the 255 combination values can be extracted from the files by highlighting each of the six faces individually, and saving each as a Text Area. To convert the 255 values to RGBs you can use in *Draw*, divide them by 255 and multiply by 100. For instance '203 0 187' is 79.6% Red, 0% Green, and 73.3% Blue, which makes a fair purple.'

Jack has supplied a lot more information on matters of colour and hue in the form of three more drawfiles which you will find on the cover disc. In particular, Jack explores the subject from the perspective of the Art and Design scholar, rather than that of the physicist, and argues the case for those who wish to dispel the 'myth' of the *Three Primary Pigment Theory*.

Jack explores the history of 'primary' pigments, from the initial ideas of Titian, through Le Blon's three colour lithographic separations, and onto nineteenth and twentieth century theories where colour models based on five and even six 'base' colours emerged. All invaluable material for those who know their anilines from their elbows.



# NEW! from STD

Stuart Tyrrell Developments

## NEW! Switch Boxes



Share keyboard, mouse etc between RiscPC and PC

Complete with all cables, adaptors etc. Add PS2Mouse to use a switched PS/2 mouse with an Acorn machine

| | |
|---|---|
| Keyboard (AT or PS/2), PS/2 mouse and Serial (ideal if your monitor has 2 inputs available) | £39.95 |
| Keyboard + Monitor (twisted pair VDU cables) | £39.95 |
| Keyboard, Monitor, Serial (eg serial mouse) | £49.95 |
| Keyboard, Monitor, PS/2 mouse | £49.95 |
| 15HD to 5xBNC cable for 2-input monitors | £19.95 |
| 15HD m-m tw pair (as supplied with switches) | £14.95 |

Many other switches, cables and adaptors available!

## NEW! Touchpad



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|---|---|
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| ACA57 Card + PCPro3 if you return PCPro2 disc | £310 |

The following prices apply **if ordered at the same time:**

| | |
|---|---|
| Windows 95 on CD ROM | £65 |
| PCSound Professional (sound support by RCI) | £35 |
| IBM PC DOS v7 (not required for Windows) | £10 |
| Network Links Software for **one user** | £20 |

Our Web page on Benchmarks shows the tiny effect of a larger cache or a 133MHz processor; the processor we offer here has a heat sink fitted and does not need a fan DirectX/VESA support does not generally benefit from more than 128Kb cache anyway.

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Tel: 01 223 811 679 Fax: 01 223 812 713
www.aleph1.co.uk/AcornProd/Software/PCPro3Demo/index.html

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| | |
|---|---|
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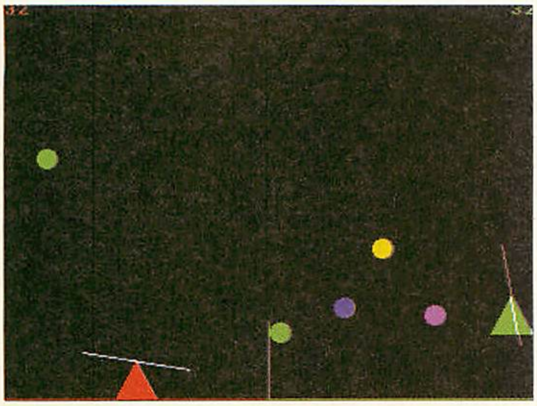
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Users note FREE update v2.16 is now available.

## 27 ways to amuse yourself with balls (and a headache)

Author: Matthew Wilson



As if your fun was not complete, here is a veritable compendium of games in a single, modest Basic program. **Matthew Wilson** is the programmer behind *PingPong* not so much a bat-and-ball game as, well, 27 bat-and-ball games.

'*PingPong* is a small Basic file with a graphically prehistoric, but surprisingly addictive 2 player ball game. No, not the 'keep the ball from going off the screen' Pong type thing. It's more like tennis, in as much as tennis can be played by floaty triangles – basically keep the ball(s) off your side by walloping them with your bat onto the other side. There are loads of game parameters that can be tweaked, and a menu of 'pre-tweaked' games to choose from too.'

It is these pre-tweaked variants that provided us with much delight in the *info office – they have wonderfully descriptive names. Who could resist a quick session of zoom-about-low-net fatty-whack?

*Headache*, on the other hand, is a 'colour cycling zooming diverging random mess'. It is well named and probably fortunate that there is only one of them.

## Rays your glasses

Author: Jack Peacock

...and toast what will surely be the last Basic ray-tracing program to grace these hallowed pages. **Tom Thorne** is the force behind it and he supplies two versions – a plain phong shaded one (three snooker balls in a coal shed) and a bump mapped one (three golf balls in a coal shed, assorted colours).

As we look back over the last 100 *infos,



it staggers us to think of what a load of balls (of one sort or another) have been on show – some merely static, illuminated by some hazy, virtual light – others bouncing around like there's no tomorrow. Tom's are some of the finest yet seen though, and he gives us some information on how to get the most out of them.

'Altering *xres* and *yres* changes the resolution of the image produced. The raytracer works by giving the viewers eye and the screen coordinates in 3D space. For each pixel to be coloured on the screen, the program tests to see if a ray fired from the viewers eye through the corresponding point on the virtual screen would intersect with a sphere. If so then the phong illumination model is used to see how close to a light source another ray reflected from the surface would be, to choose an appropriate colour for the sphere.

'The distance to intersection is calculated using the vector of the ray, the coordinates of the sphere and the coordinates of the eye, solving a quadratic equation (too big to write down). If the ray does not intersect the equation will be unsolvable, otherwise it will give two distances along the ray (hitting the front and back of the sphere).

'The quadratic equation can be found as follows. When a point in 3D space (x,y,z) is on the surface of a sphere at (a,b,c) of radius r, then:

```
(x-a)^2+(y-b)^2+(z-c)^2=r^2
```

'A point (x,y,z) of distance t along a ray of vector (vx,vy,vz) from an origin (ex,ey,ez) is:

```
x=ex+t*vx
y=ey+t*vy
z=ez+t*vz
```

'Substituting these into the equation for a point on the surface of a sphere allows you create a quadratic equation which can be solved to find t, the distance along the ray where x,y and z will be on the surface of a sphere.'




### Ivor bold one (and a medium one)

Author: Ivor Clarke

If you enjoyed Ivor Clarke's fonts on the January 1999 cover disc, you will be appreciative of this update. Ivor has been gently tweaking with his earlier creation and has also added the dreaded Euro symbol too. (As it happens, we at the *info office have just acquired new machines complete with Euros on the 4 key and I still regularly mistake these for ants.)

Add Ivor's fonts to your regular *!Fonts* directory as per the instructions in the January issue. Both the eponymous *Ivor* (which comes in bold, medium and light flavours) and *Technical* have received a makeover.

### Water way to go

Author: Mark Adcock

Move the mouse left and right to change wind direction, up and down to change number of rain drops (to suit the speed of your machine). Mark Adcock originally sent Rain ages ago and it was scheduled for the September 1997 issue, but somehow it never made it into the magazine. Anywho, here it is 21 months late.



# Norvege, deux points

Author: Jonathan Rawle

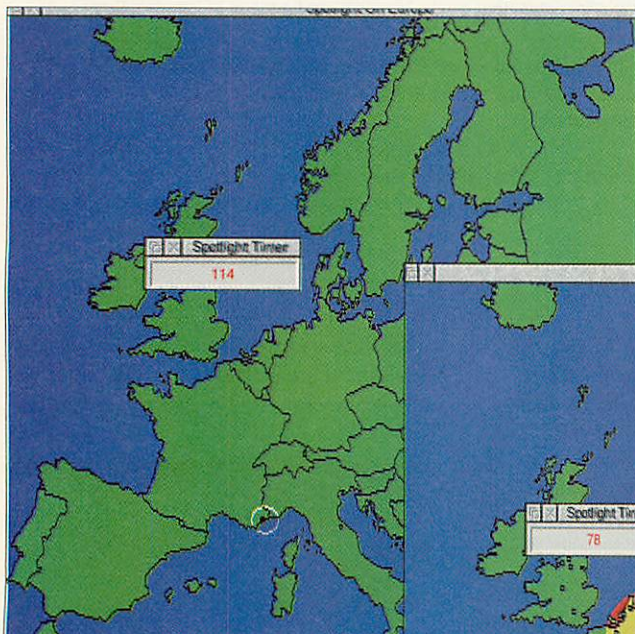
If you fancy czeching out your knowledge of things European, Denmark this page in your favourite magazine. Here you will find details of the splendid Euroquiz *SLoEurope* ('*Spotlight on Europe*') from the equally splendid **Jonathan Rawle**. If you remember the original program *Spotlight on Britain* (or *SLOB!*) by J David Barrow way back in the August 1994 *Acorn User*, you'll be in Norway disappointed with this desktop Euroversion.

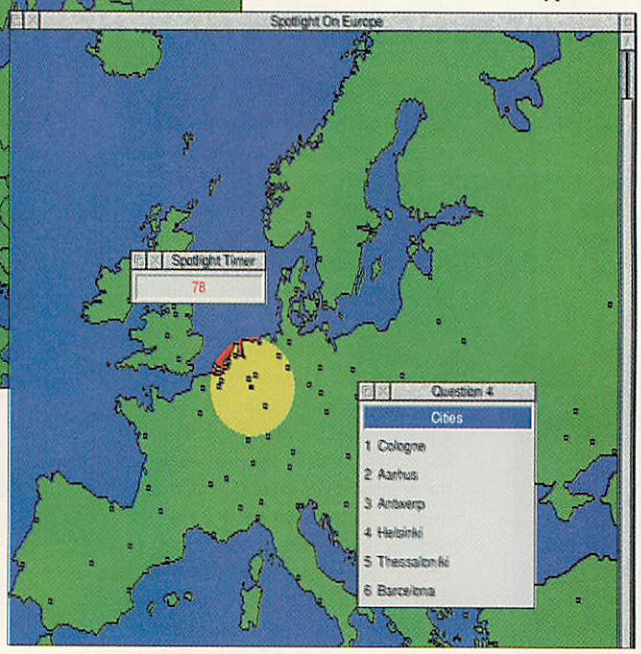
'*Spotlight on Europe* is a quiz testing the user's knowledge of countries and geographical features of the continent of Europe. Features are highlighted on a map of Europe and the user must identify them, selecting an answer from a choice of six.

'Any combination of the eight categories can be attempted together: countries, capitals, cities, rivers, islands, peaks, inland features and sea/coastal features. The aim is to give as many correct answers as possible in two minutes [not wanting to Russia or anything].

'To begin a new game, either click Select on the iconbar icon or choose the 'New game...' option from the iconbar menu. The computer will choose a random category out of the ones selected in this window for each question.

'Click on the button at the bottom of the window to start the game. You will see the first geographical feature to be identified highlighted on the map of Europe, and a list of six answers to choose from. Click an answer or type in it's number.




*Test your knowledge of Europe*

'You must select the correct answer before you can continue with the next question. When your two minutes are up, you will be told your score and asked to enter your name for the score table [if you have done well enough not Toulouse]'

If you are Hungary for more, Jonathan has many plans for future enhancements, including extending the map eastwards to encompass Elbrus, Europe's highest mountain. (And watch out for next month's issue when we shall seamlessly weave Dnepropetrovsk into a cunning pun).

# Damp quids

Author: David Llewellyn-Jones

*DeskDamp* is a tiny tiny tiny program from **David Llewellyn-Jones.** It unleashes a fountain of dampness (if such a thing is possible) onto the unsuspecting desktop. The flow starts from the top, in the centre of the screen, and descends downwards until it hits a window or other object, at which point it will attempt to flow around it. By arranging the windows appropriately before you run the program (it isn't multi-tasking) it becomes possible to produce a pleasant 'mountain cascade' effect.

As far as I know the program will only work in 256 colour modes on a Risc PC, but it shouldn't matter what size/resolution the screen is set at.

The program works by using a simple particle algorithm: each droplet will move downwards until it hits something, at which point it will attempt to move either left or right (choosing randomly if both are possible). If it cannot do any of these it will then attempt to move upwards. The program doesn't do this quite properly in order toallow it to fit into 256 bytes, but it's effective enough.

Windows are detected using simple colour testing: if it's darker than the standard backdrop (colour 48) then it's considered to be a foreground object. If therefore you find that your windows are too clumsy to create the precise effect you want, it's possible to draw a landscape on a sprite and place this on your backdrop.

An example backdrop is included which produces quite a pleasing effect. Unfortunately neither *SLO Europe* nor *DeskDamp* are on this cover disc. They will however be on next months along with more *info programs.

## *Quit

All submissions bendy or shaky welcome.

***INFO, Acorn User, Tau Press, Media House, Adlington Park, Macclesfield SK10 4NP***

or, e-mail us (including your real address please) at:

***starinfo@acornuser.com***

No e-mails longer than 100K please. Screenshots, background info and customisation ideas are always most welcome. Please put your name, address and program title on every disc and include a text file containing your name, address, disc contents and program details. An SAE will ensure your discs are returned.

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# Saving the Day

*Pam Turnbull shows us who's*

Simon Anthony has come up with a useful little program which could prove a real boon for those who use the *MyWorld* suite of programs. Called *NewSaver*, this lets you save your work from any application and on any RISC OS machine. But in particular it adds new saving facilities to *MyWorld* providing a new, simpler, intuitive and familiar way of saving.

*NewSaver* has two main modes of operation. The first mode can also be used in two ways – either via a large window (which looks like a normal *MyWorld* popup window) or via a much smaller window which holds the user's name. This second mode uses the normal saving menu from any *MyWorld2* screen. Both modes can be used together.

Files are then stored in directories named after the people who use them, or after the general nature of the items stored inside. This named directory, the 'Current User' directory, is accessible at all times and can be used on a standalone harddisc, floppy or network machine.

Each newly created directory has three sections within it which are not normally visible to the user all at once; a Work Done section for finished work, a To Finish section for work in progress and a To Print section which is best suited for use with *MyWorld2*. Each save directory application is stored in a single application directory called All Work for easy access and is automatically created the first time *NewSaver* is run. A neat and time-saving program. To find out more contact ECS on 0115 979 9684.




## Suite vs standalone

We've been contacted by a fourth year teaching student from Bishop Grosseteste Teacher Training College. Claire is researching the use of ICT in classrooms especially focusing on the use of computers within english and music. What she needs is teachers' opinions on the use of computer suites versus one computer per classroom. If you have experience you'd like to share with Claire then please drop her a line via *Acorn User* and we'll pass your comments on.

## On-line

Reporting on BETT earlier in the year I mentioned Galaxy Kids which has just gone live in the UK on Freeserve. The producers of Galaxy Kids, Sunshine Multimedia (UK) Ltd, today launched a subscription magazine which uses the Internet to deliver a complete learning package for children aged 3 to 7 directly into UK homes.

Promising the equivalent of a 52 week part-work, Galaxy Kids allows children to play with the specially written interactive material live on the Internet, and also download a 'living book' and activity sheets to keep. Each weekly instalment includes over three hours of fun learning activities featuring animation, voice-overs, sound, stories, music and other activities which parents and children can enjoy whenever they want. The activities are designed to develop early literacy and numeracy skills using stories, interactive activities, an animated alphabet, phonics sections and printable activity sheets, as well as parents' guidance notes. The programme has been designed to meet the specific needs of the UK market, in line with current educational initiatives, such as Literacy Hour and school/parent partnerships.

Galaxy Kids is set aboard an alien space station in orbit around the Earth. Children follow two characters, Zolar and Zina, who have been sent on a homework mission to learn all about planet Earth. The home page displays three parts of the 'space station' – the Story Room, the Club Room and the Parents' Room.

Visitors to the Story Room will discover 52 interesting and enjoyable stories that increase gently in difficulty month by month. The Club Room offers a wide range of frequently updated learning activities, including nursery rhymes and extended help with learning the alphabet. Here children will also find the writing section which is designed to help them understand how stories are written, how stories should be read, and offers help with selecting words to create new sentences.

Meanwhile, the Parents' Room explains how to get the most out of Galaxy Kids, it includes a questions and answer service on early reading, links to other useful Websites for parents and a place where parents can download stories and activities

University of Exeter's Professor Ted Wragg commented: 'Many parents want to know how they can best help their children at home, without cutting across what the school is trying to achieve, so Galaxy Kids could be an easily available and regular source of useful ideas.'

If you want to know more there is a free tour available on www.freeserve.net – just click on the Early Learning sections, or go directly to www.galaxykids.co.uk. If you decide to commit, the charges work out at about £2 a week and you can subscribe monthly or annually. END

## Gems

**If you ever despair about teaching Science to under 14s, then here are some real quotes from some recent Science exams:**

- 'Water is composed of two gins, Oxygin and Hydrogin. Oxygin is pure gin. Hydrogin is gin and water.'
- 'When you breathe, you inspire. When you do not breathe, you expire.'
- 'H20 is hot water, and CO2 is cold water.' 'To collect fumes of sulphur, hold down a deacon over a flame in a test tube'
- 'Three kinds of blood vessels are arteries, vanes, and caterpillars.'

**If these made you smile you can get the full list by sending me a quick e-mail to educ@acornuser.com**

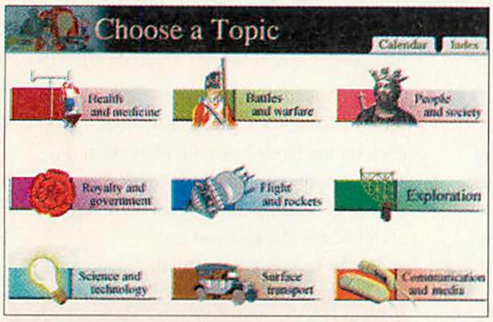
# Way back when

*Pam Turnbull takes a trip back in time to see just what we've done with this millennium*

Y2K fever has not hit us with its full force yet - but it will. First to cross the finishing line in the education race is Sherston with *This Week in History*. Quite simply this is an historical CD-ROM full of images, text and clip art covering events over the last one thousand years.

The program opens to reveal a three-tabbed presentation providing information by Topic, Calendar or Index. There are nine topics on offer: Health and medicine, Battles and warfare, People and society, Royalty and government, Flight and rockets, Exploration, Science and technology, Surface transport, and Communications and media. All tie in nicely to History at Key Stage 2 and 3 but fall down on the general interest.

You can choose a topic which fits with your theme, or browse at random. Whichever option, the topic headings open to reveal a chronology of people and events. For instance, Science and technology starts with Copernicus in 1473 and ends with the Thames Barrier in 1984, while Exploration begins with Columbus in 1492 and stops at 1911 with the South Pole. I was somewhat disappointed not to see Cabot in this list though. This is not a definitive list of every famous person or event, rather a taster which should send children off on more in-depth research.




The lists are also eurocentric, which is to be expected considering how we're counting the millennium, other cultures having passed their second millennium some time ago!

So what are the resources on offer? Should we decide to look at the Battle of Hastings in 1066 in the Battles and warfare section, we'll find where this event sits on the timeline, a plan of the battle, maps, information on weapons and images from the Bayeux Tapestry and some introductory text. This text is scrollable and gives the bare bones of the events leading up to the incident as well as the event itself.

Another two tabbed sections have also appeared: Clip art and Events. The latter takes you back to the list of Topic chapters, while the clip art consists of the images and text in the main section ready to be saved out as draw and textfiles.

The earliest event is 1066, with William I and the Battle of Hastings getting two entries, while the latest takes us to 15 October 1997 and the Thrust SSC breaking the sound barrier. I found the health and medicine section stopping in 1929 with the discovery of Penicillin a little odd, but the problem with this sort of package is choosing what to put in, and you're never going to please everyone. Even so there's not a mention of DNA.

Click on the Calendar tab and you find yourself in the What happened this week? section. This automatically opens on the current week with notification of an event and the date. So, the first week in July shows you that the 1 July in 1916 was the First day of the Somme, while on 3 July in 1938 the land speed record was broken.

As you'd expect, clicking on these entries takes you to the event file with its associated text, images and timeline. You can change the month and week




whenever you want, and there are between 1 and 4 events recorded for each week in the year - October being a particularly busy month. Some are of world renown while others are somewhat smaller in importance, but have still impacted on our daily lives perhaps more than we'd like to think.

If you're looking for something specific your best port of call is the Index. Arranged into nine alphabetical groups you can jump straight to a part of the alphabet or scroll through an entry at a time. Click on something that intrigues you and again you find yourself at the relevant topic page which can be printed out.

There is no search option, but you can manage without one. However, I would have liked the facility to add your own events and dates to the calendar. Rather than a red blob denoting further information and a link to the Topic section, a blue square could easily have told people it was an event added by users. A nice idea but unfortunately the potential has not been fully realised. END

## Product details

| | |
|---|---|
| Product: | This Week in History |
| Price: | £40 |
| Ages: | 9-14 |
| Supplier: | Sherston Software |
| Tel: | 016666 843 200 |
| Web: | www.sherston.co |

# Science at your fingertips

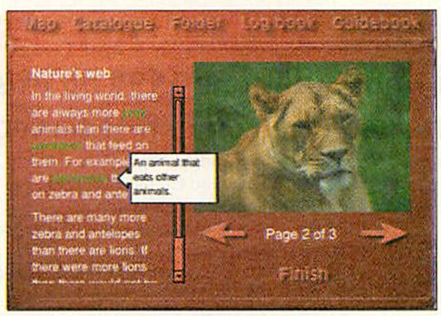
*Pam Turnbull looks at the first in the long-awaited Explorer series*

The Explorer series, developed by ILP for YITM, has been a long time coming. Time has passed and though the PC version has been out for three years, the Acorn version has only just made it to the shelves. The company itself is now part of Granada Learning; and with the news that Granada (comprising SEMERC and YITM) is steering away from their total commitment to the RISC OS platform was it worth the wait?

Taking the concept of a museum, *Science Explorer* presents you with five subject-specific galleries: Living Things; The Human Being; The Material World; Electricity, Light and Sound; Forces and Motion; and Space. As you manoeuvre around each gallery you'll come across displays, clicking on which reveal information and activities.

There are exhibits in each gallery from What species is that? to The Moon. Some of these are categorised as Fact Points with snippets of information, while clicking others such as a bicycle or hunting eagle open up to give *Learn About* screens which are written and narrated slideshows, well illustrated by drawings and photographs. If you want more information than this brief overview, there's the Tell Me More button at the bottom of the Learn About screen. This reveals more information and graphics putting more meat on to the skeletal concepts.

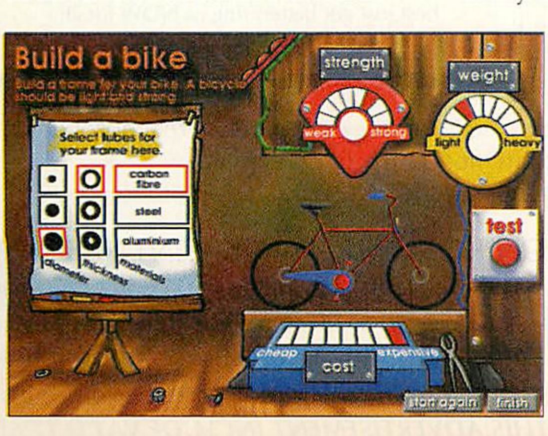
Alternatively you can click on Experiment, of which there are 25 in total. Each one is nicely presented and explained as you access it, though I did find that children didn't always find these totally intuitive to use. Finally there is the option to Test Yourself, which provides five multiple choice questions (at two levels of difficulty) to see if you've been paying attention.




Now you could start your virtual tour in the material world gallery and click on an attractive display of snowflakes. This opens to present you with information on how important water is in words, pictures and text in its Learn About section. Unusual or scientific words are highlighted and can be clicked on for further explanation – water is usually a liquid, for instance.

A click on the Tell me More button provides information on cloud formation, while the associated experiment is all to do with filling a bath by controlling the flow from the tap and the effect of the plug.

You can stroll around at random, but you can also access the index which lets you specify your interest and decide if you want pure information, or do-it-yourself experiments. I also like the way that you can create your own notebook folder of pictures, text, and your own notes including sound. This could be a useful aide for project work or be used as a presentation device – although it isn't ideal for that purpose. A sixth gallery contains a quiz that can be set up for children to play on their own or against others.




The experiments are interesting and mostly well chosen, however some do tend towards the pretty interactive illustration variety. In the Earth section you can play with Newton's Orbit. However, who Newton was, what else he did, and the impact he had on the scientific and mathematical communities and society in general is left to the teacher. Instead children have to type in a number for the launch speed of a satellite leaving Earth. There is no guidance whatsoever on the speeds required, or why speed is important and so on. The children loved it, but as an experiment it makes a better reinforcement or consolidation exercise. The subjects covered mirror the requirements of Key Stage 2 – although when I was using it with a Year 6 class on Space it didn't quite give the level of detail some of my Level 5 children craved.

You'll either love or hate the virtual gallery idea. I found that teachers had more problems than children when it came to the navigation – nothing new there! Navigation becomes easier with practice, but personally I'd avoid the virtual tour interface – at times it's slow and you find yourself going around in circles even if you're used to this style of navigation – and stick to the catalogue. Information can be accessed much more quickly and succinctly via the catalogue. Additional help is also provided by the Log Book which records where children have been (and their test scores), built-in guidebook and map for quick access to a gallery.

Children react well to Science Explorer, the graphics are varied from the fun to the informative, there is never too much text on screen and the information is relevant to what children are expected to know at this Key Stage. It does lack depth in places, but this is not a virtual teacher only a teaching tool. Despite a few niggles, it's a must have CD-ROM.

END

## Product details

| | |
|---|---|
| Product: | Science Explorer |
| Price: | £34.99 |
| Ages: | 8-12 |
| Supplier: | Granada Learning |
| Tel: | 0161-827 2927 |
| Web: | www.granada-learning.co |

# Bass drone

*Steptoe and Son (Mike Cook and Alec) produce a drone generator for an electrical guitar.*

This all started some time ago when Alec brought an electric organ home from school. 'They don't want it' he said, 'can we use it for parts?' Now modern keyboards are reasonably sized, but this one resembled a small sideboard. What he really wanted was the bass pedals, he wanted some sort of drone generator to accompany his electric guitar playing. The idea was that by pressing a pedal he could produce a note that would last until he started another one.

Well that concept had to be refined a bit as you could then never turn anything off, so we came up with the idea that pressing the same pedal as the sounding note would turn it off. Finally, as what was being constructed here is really a musical instrument, I had to devise something to change the timbre of the note. The idea is that these pedals can output MIDI data, and a sound module or computer could actually generate the sound.

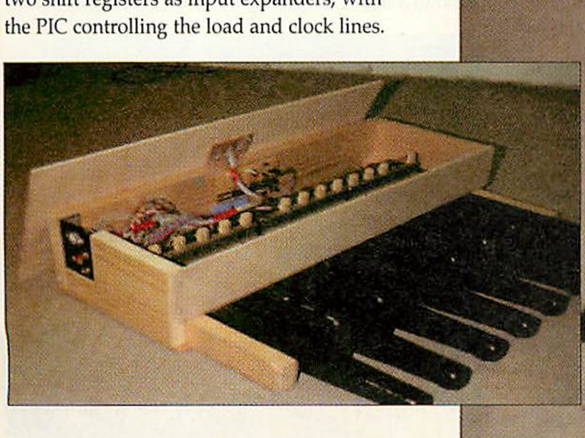
This is an ideal project to implement with a PIC chip, in fact you might struggle making it any other way.

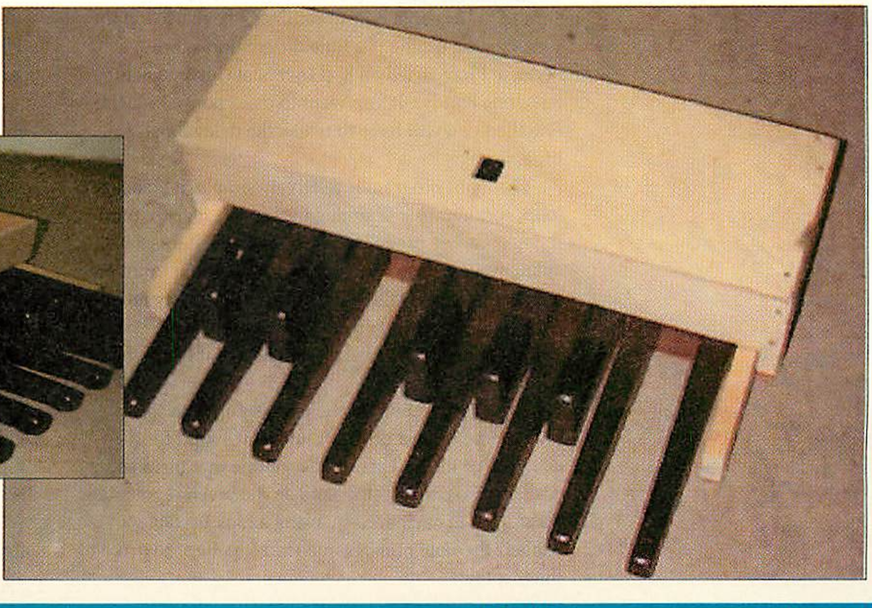
Well, the bass pedals were removed from the old instrument, and one or two other bits and pieces saved for a rainy day, the rest was sent to the scrap heap. If you haven't got access to scrap like this then bass pedals can be purchased separately. The pedals activated simple spring switches and there were thirteen all together, covering just over one octave. Now the main problem with the 16C84 is getting all those switches into the chip, there are not enough inputs to wire them straight in so I had to resort to some additional logic.

The circuit is shown in figure I and uses two shift registers as input expanders, with the PIC controlling the load and clock lines. One of the I/O pins is used to generate the MIDI output data stream, and the large drive capacity of the B Port is used to directly drive a seven segment display. The idea was that the display could show you the note being played, with the dot on the display indicating if that note was a sharp. With a bit of imagination, and judicious use of lower case letters, you could get it to display all the notes.

There is also an extra program switch but that is not necessary for the basic circuit, only if you want to expand the system. There are 13 switches on bass pedal so they fit onto the first 13 inputs of the shift register, this left three inputs free. I wired one of them up to a separate non-latching foot switch to allow the voice to be changed, and the other two are spares, see later for ideas on using them.

I built the whole thing in a wooden box, along with a 5 volt regulator so that it could be run off the supply Alec uses for his other effects pedals. The seven segment display I used was reasonably large having 8mm long segments, you could even use a bigger one if





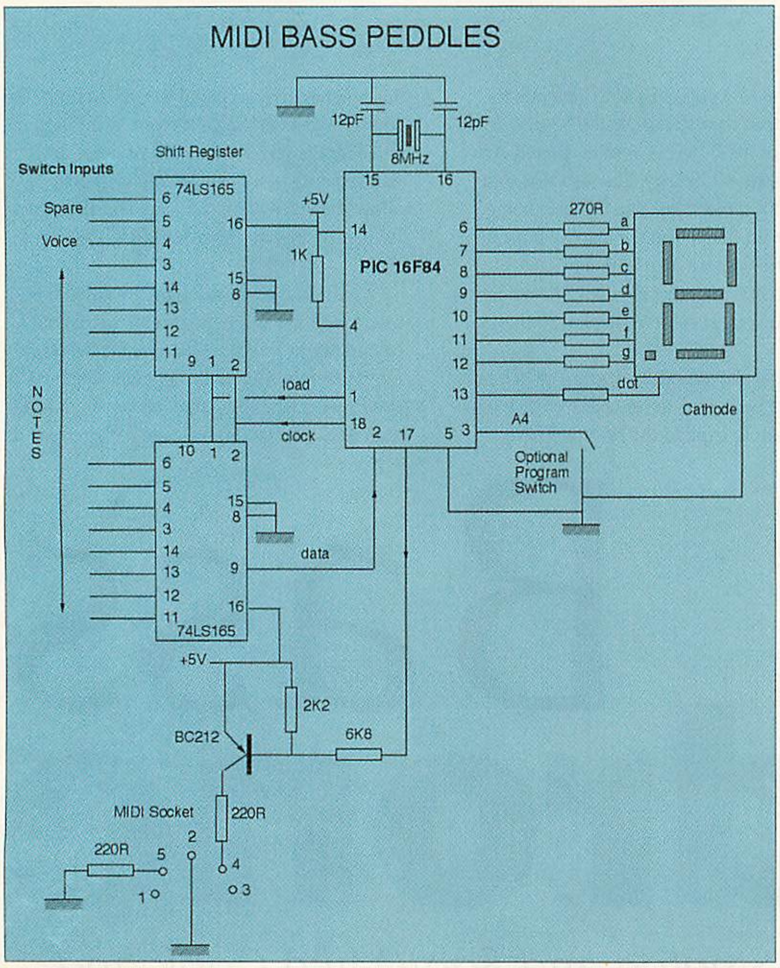



*Fig I: Bass Peddle Circuit*

you want as the PIC will supply up to 25mA on each Port B pin. Now I wanted to paint it black in true rock and role style but Alec preferred the wood finish, 'it's cool' he said.

So, armed with the hardware I set about designing the PIC software. The MIDI output is similar to the serial output routines I have used in the past, but the timing is a little different this time because I have used an 8MHz crystal (I happened to have one handy). If you want to use a normal 10MHz one then you will have to tweak the delay loops a little.

The main program is relatively simple, it waits in a loop, continuously scanning in the shift register until it detects a key press. It then looks to see if it is a spare input pin and if not converts the input number into a MIDI note value. This is done by simply adding 24. Then, if a note is already playing it is turned off and the new note turned on, but only if it is different from the last note.

There is an option in the voice setup data to hold a note on in a drone or just let it sound for the duration of the key press. The routine that turns the note on also displays the note on the seven segment display, this is achieved by using a look up table to convert the note number into the bit pattern to drive the display.

Now if the 13th key is pressed this indicates that we want to change the voice or sound. The display then shows a small letter c (for change) but to differentiate it from the note C it is displayed on the top half of the display and underlined. Then pressing a normal key will set the instrument to a new voice. There are 13 voices pre-programmed into the instrument and held in the EPROM data section of the PIC.

This is a section of the PIC that I haven't used before in any of my projects and it needs a bit of messing about to access it, you are best looking at the code to see what it does. There are two data entries for each voice, a program number followed by a bank number. This is for the MIDI XG system which allows more than the normal number of voices, the bank number should be ignored by normal General MIDI. Alec chose those voices that he thought best suited a droning bass line. Also the most significant bit of the bank number is set if you want the drone function to be on.

This is done by adding a constant H set to a value of 128. In this way you can clearly see the bank number and your choice of drone. The data is at the end of the program and from the 'OR' address it will be placed in the data area.

Well that's all there is to it, apart from the usual extension ideas that you can use to make the project your own. There are two extra shift register switches and an extra direct input. I thought you could use one of those switches to indicate you want to change the effects added to the note. The XG module allows you to add in sound processing for both notes and audio inputs, the effects include echo, reverberation and pitch shifting. Finally you could use the optional program push button to initiate a voice programming sequence. This could allow you to enter the voice data parameters and store it in EPROM data memory to enable you to conveniently change the range of sounds it makes.

Well there you have it, a novel instrument made from a simple handful of chips and a bit of scrap. Having made it, I did see one for sale second hand in a music shop, they wanted £160 for it. **END**

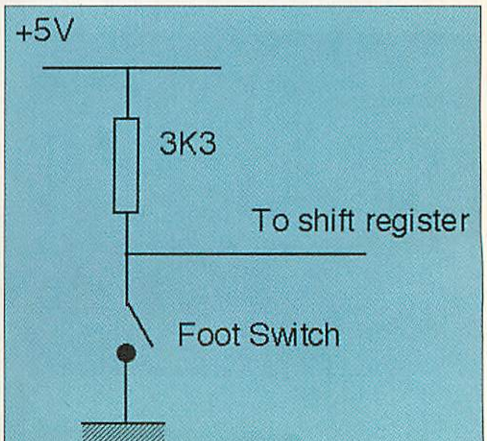



*Fig II: Put pull up resistors on all inputs*

# Rambles through Acorn Wood

*Mike Cook solves some antipodean troubles*

I have been neglecting my Web site recently, so this month I added all the 1997 Run the RISC articles which include such delights as a weather satellite receiver and the PIC micro controller stuff. Speaking of which, hot on the heels of last months upgrade to version 1.1 comes version 1.2. This adds an optional window that displays the extra memory in the 16F84 versions of the chip, it's on the cover disc.

As I have said many times before, feedback on previous columns is always welcome, it's a big world out there and I don't pretend to know all the answers. What makes the Acorn community great is their willingness to help out, something you won't find on other platforms. Therefore I was quite pleased to see this from John Crane of Harrogate:

**'I was reading the February column and thought I would pass on some of my experience regarding the StrongARM Risc PC. I had similar problems with my computer, when I purchased it new last year. Basically my 586 PC card kep t locking up and crashing. Sometimes on start up and other times just when you'd nicely got involved in some intricate PC software. In the end it was sorted out under warranty.**

**'Apparently some StrongARM processors need retiming slightly, although this should only be the case for early versions. Mine was tweaked and it made not the slightest difference. My PC card still crashed. After being thoroughly checked out the fault was found to lie with a Memory SIMM. One chip on one bank of 32Mb was running slightly low and bringing the PC card down with it. A completely new 32Mb SIMM was installed and it's been fine ever since. Try swapping the SIMMs from the alternative machine and also the VRAM (if fitted) and see if that helps.**

**'On the BBC to RISC OS topic, this is just up my street, as I like to carry on using my old favourites for as long as possible.**

**'Option 1: I have an old Electron with DFS and ADFS and a 3.5 and 5.25 drive. What I do is DFS format some 3.5 DD discs. Copy the 5.25 software onto these and I can then run them on my Risc PC or A3010 with 6502em by WSS combined with either *ArcDFS* (IDFS) by Richard Averill or *ImageDFS* by WSS. ArcDFS can even format DFS discs on your RISC OS machine. If Richard Fearn, or anyone else for that matter, wants to write to me about it I can go into more detail.**

**'Option 2: In the February issue of *Acorn User* on page 66 there is an advert for Multi Link. This is a serial transfer utility complete with serial cable priced £29.95 from The Really Good Software Company. I've not tried this method myself so I can't comment on it's suitability.'**

Thanks, if any readers want to contact John I will pass on your letters. Stuart Pigneguy from New Zealand, who describes himself as an ex-Acorn A4000 user, is perhaps seeing the folly of his ways.

**'I just love the thought of using Acorn computers. I used to own an A4000 with 2Mb RAM, to me they were the best computers in the world, nothing could compare. Until my friend's got IBMs and they asked me to create a network and play IBM compatible. games. I decided to sell the A4000 and buy a new monitor for that 486 that I was getting used to. Call me crazy (I do – Mike) but it had to be done. I remember there was a software programme called PC emulator that ran an early version of PC DOS. Now I am wondering if there is such a thing as an Acorn emulator for my IBM? I think that if there is no such thing, somebody should do something about it. Out of all the things I like about Acorns, they cost so much! Where does all the money go? Into flawless software and hardware?'**

I think you've answered your own question there, the money went into a machine that is still running and viable but cost more. It seems that the majority of English and U.S. society want the lowest price, irrespective of quality. This doesn't apply to all nations, which explains why Acorns and Apples are quite popular in places like Scotland, Holland and German. As I have said before – people like rubbish, look at the best selling newspapers or highest rating TV shows.

As to the hoped for lifeboat in the form of an emulator, sorry there isn't one and there is not likely to ever be. The problem is that you will have to emulate the operating system and that is copyright Acorn (now licensed to RISCOS Ltd). So the only chance of a third party emulator is to reverse

---

John Wilson wants an upgrade.

*'I work in a secondary school which owns several Acorn 3010s and the question that I have been asked is, 'Is it possible to add a harddrive to a A3010 and still keep the MIDI board that's in the expansion slot, or will I need to recommend getting an external harddrive, and is this possible?' or is the A3010 not worth upgrading?'*

There is limited space inside an A3010, you might be better going for an internal harddrive and replacing the MIDI with an external unit, EPS do one of these. Alternatively talk to SimTech or indeed any Acorn dealer about fitting an external drive.

I had a conversation with Philip Mellor over the internet it went something like this:

*'Is there an easy way to convert a program written for the Acorn desktop to Microsoft Visual Basic? If not, is there a difficult way, or indeed any way, that doesn't involve rewriting the program in its entirety in VB? '*

Sorry, no. They are totally incompatible in virtually every way.

*'Oh well, that serves the school right for changing the majority of lessons over to Windows then. On a totally unrelated subject, I've noticed that on the Risc PCs we still have at school you can turn directories into applications using a hard space (ASCII 160) instead of a '!'. Is this a feature of RISC OS 3.5+, or is it just a system patch that's been included in the boot sequence that I don't know about? (I have an A3010 at home and it doesn't work on that.)'*

I have RISC OS 3.7 and it doesn't work on that so I would go with the patch theory, does any reader know which one it is?

*'Also, on my A3010 I have recently bought a parallel Zip drive with the Argo driver software. It works well, but when I try to run many games from a Zip disc the screen flickers horribly. I have tried all the usual solutions, such as increasing the screen memory in the task manager or changing mode before running, but this doesn't help. The flicker only occurs when I have the Zip software loaded, so I assume this must be the cause. Do you have any ideas why this happens, or can you provide a solution (other than copying the games to harddisc and resetting the machine)?'*

Have you asked Argo about this? It sounds to me like the software is running continuously under interrupts looking for something like a disc eject. There is really no need to do this but there is no cure I know of other than to get back to Argo.

engineer it. Considering that will take tens of man years, no one will want to put in that effort. You could probably buy up all the remaining Acorn stock with that sort of resource.

Chris James knows what those mysterious files are on the Sony Photo discs.

**'I can shed some light on the queries regarding the Sony Mavica digital cameras. First, the JPEG files produced by the current cameras (FD51, -71, -81 and -91) are all standard JPEGs, and open into any compatible RISC OS application. It was only the first generation cameras (FD5, FD7) that had problems, and that was solved by passing the image files through *JPEGtrans*. The promo disc you received was a *Director* presentation and it wasn't very exciting.**

**'The hidden files are 411 YUV-encoded files 64x48 pixels in size that the camera uses as its own thumbnails. For all intents and purposes, once the diskette has been removed from the camera, they are useless. As for the disk system, it is remarkably convenient. Taking images using the FD81 takes only a few seconds to compress and record – the Sony 2x drives are excellent. For my work, we use these cameras a lot, and swapping discs is no less easy than swapping memory cards.**

**'If, like me, you need to record over 200Mb of images over the course of four days, then I can't recommend this range of cameras highly enough. The battery that comes with the FD81 lasts for about 2 hours of continuous use, which equates to approximately 250 images on 10 discs at 640x480 resolution. Since we use them all day, we have two spare higher-capacity batteries, each capable of running the camera for up to 3 hours. The camera has a natty little display showing how much time is left on each battery, and experience indicates thatt it is very reliable. Well worth having.'**

Mike Buckingham (yes the one who writes the PC column) had the sort of problem I like:

*'I was hoping you might be able to solve a RISC OS problem I have had for a long time. It's not terminal, just annoying. Basically when pulling open some windows, the shadow effect at the edge does not get overwritten properly with the background – so it leaves these lines across the backdrop. As I write I've just noticed a major clue: it happens on the V oyager mail box screen but not on Voyager's compose mail window.*

*'The difference would appear to be the 3D effect on the former – absent on the latter. What I don't know/can't remember is what applies this effect, whether it be an official bit of RISC OS or a patch that has crept in and remained. I don't use NewerLook, but I have a feeling there is a 3D effect in there somewhere that might have been added when I have played with such things. I shall go hunting: maybe I've just solved my own question, but maybe not – so if you know the answer....'*

However before I could put fingers to keyboard back came the second part of his message:

*'Hmm – an object lesson in the idea that formulating the problem clearly enough for someone else to understand often solves it. If that's not an axiom maybe I'll claim it. It was indeed 3DRomPatch. Without it life is flatter but has fewer black lines.'*

Next, Allan & Michael Curtis from down under have not been getting much joy:

**'We assembled your Joystick interface in the June 1996 issue of Acorn User for a Dick Smith (a Australian electronics retailer) PC joystick. Unfortunately, it doesn't work. We have made three (minor) changes to the interface – a "pass-through" parallel port which is quite simply wired in parallel with the input, a switch with an LED so we can tell if it is on or not, a 9 volt battery with a voltage regulating transistor wired in accordance with the data sheets.**

**'We notice that on your Sound Sampler project that you have included some extra circuitry besides the battery and transistor for battery operation. Should we put this in our own circuit? We know some of it works, because the software recognises we are pressing buttons, but not the movement. The parallel port wiring must be reasonably OK because the pass-through port works – that is, we can print with the printer connected through it.'**

Sorry to hear you are having problems, I am sure it is your wiring. The fact that you get print through and sense button pushing does not test much really, you need access to an oscilloscope to see what is going wrong. You should see pulses on pins 2 and 10 of the 74LS123 when the software is trying to access the joystick. Try removing the joystick and connecting the input resistors to 5 volts. The joystick test program should give you the minimum value.

Check that you are getting pulses on pins 13 and 5 of the monostable. If that is the case then make sure that these pulses are being mixed together and are appearing on the collectors of the transistors. Check that the transistor's emitters are earthed along with pin 8 of the 123. Some people don't know what that symbol means, pin 8 (of 123) and both emitters and pin 4 of the joystick should all be wired together. As to the supply usually you put a 2uF capacitor each side of the regulator and a 4K7 load resistor on the regulated side.

A R Triggs from Cullompton has a question that is perhaps more worrying than he knows:

**'How do we get rid of the irritating little bugs that seem to grow with the passage of time? Before my harddrive's electronics gave up eighteen months ago, my Risc PC started to give error messages prior to shutdown, such as 'buffer overflow', 'disc drive empty', and so on. It also required up to six attempts to drag the RAM disc facility. These problems all cleared up with the replacement of the harddrive. Since then it all ran normally until six months ago when the errors began again.**

**'The latest problem was having to do a reset, using the reset button when trying to run the PC card. The symptoms being a black screen with a blue pointer, which did move with the mouse, this being the only control that worked. Having changed it's start up to the icon bar, it will sometimes run, but usually fails with error messages such as, 'PC card failure type = S'. What does it all mean, and how can it be fixed?**

**'In this part of the world it requires a hundred mile round trip, or a courier, to visit a suitable centre of knowledge/repair. I would imagine that other users must have had similar problems, and have fixed them. Any ideas, other than the drastic clean up the harddisc, and reload all software option?'**

Reloading all the software is a PC solution not really applicable to an Acorn machine. You see, PC software is so bad that you get all sorts of software conflicts and periodically just clearing it out will sort some things out. However in the Acorn world things are a lot better and there is less opportunity for software to screw up in this way. Now this means that you have some bad news, your computer has a serious fault.

It sounds to me like this fault caused your last harddrive to crash, and so you replaced it but didn't actually cure the problem. The fact that it went away for a time could point to your problem being an intermittent connection on the logic board or in the memory SIMM sockets, see Johm Crane's contribution.

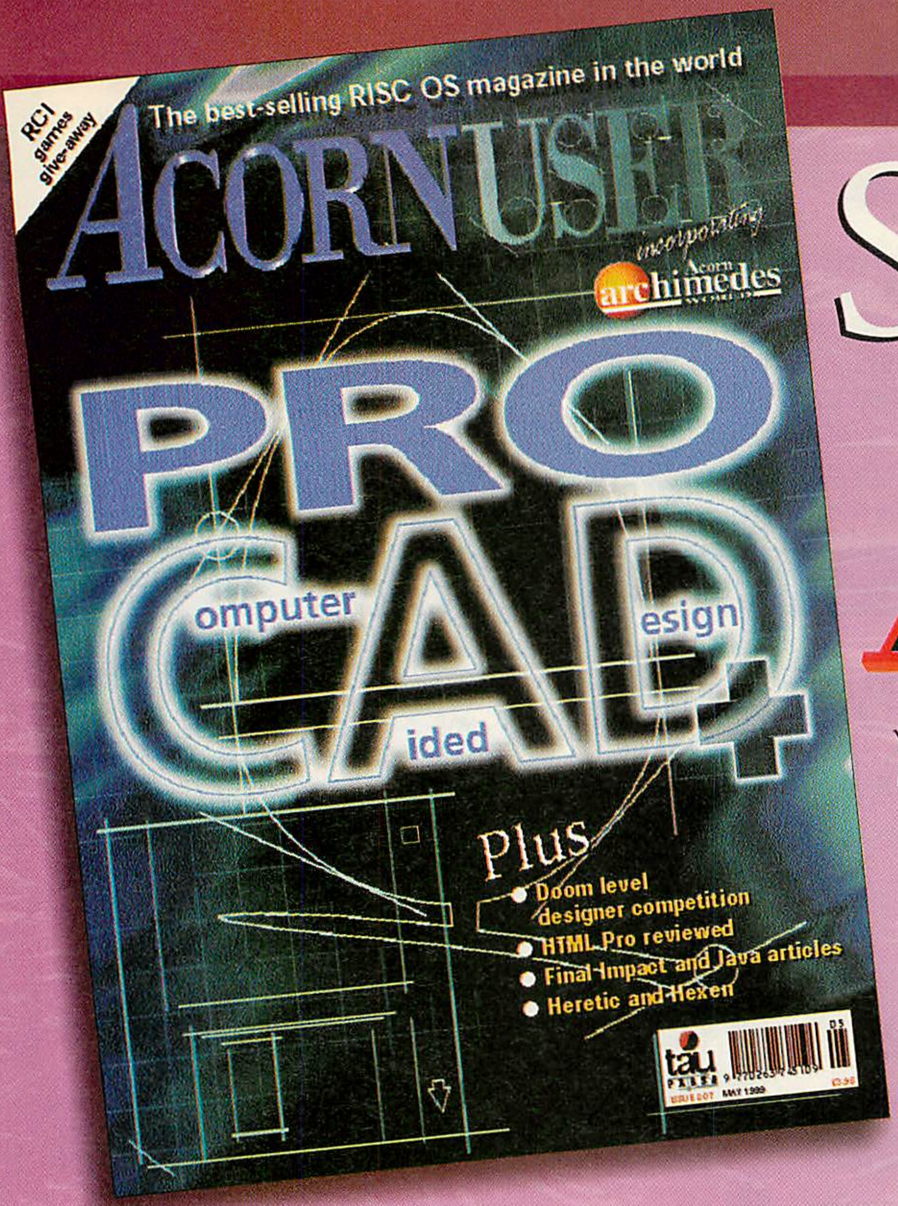
These are always the worst types of faults to track down because usually you don't know when they are fixed. What is worse, the disturbance of taking or posting it to a dealer could even cure the fault and the dealer will find nothing wrong with it. Nevertheless I think getting it to a qualified service centre is your only realistic option before your harddrive is trashed again END

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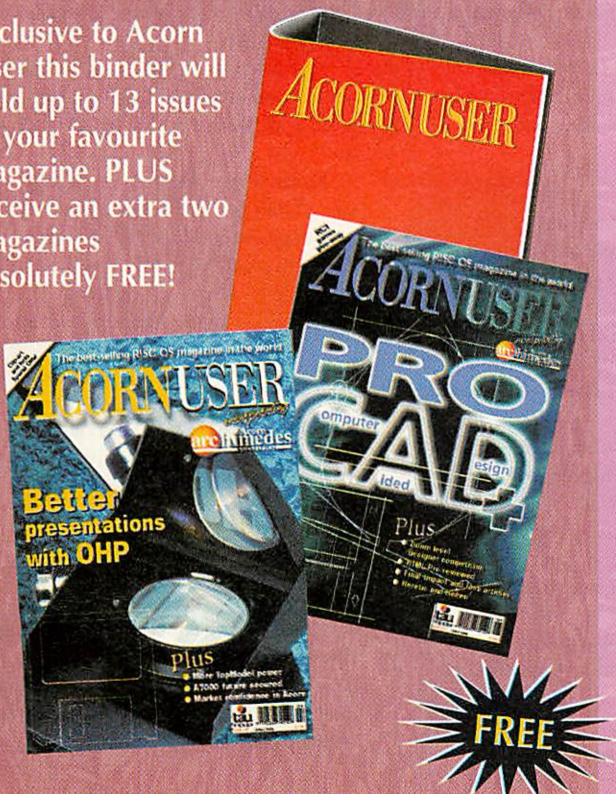
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- You can cancel a Direct Debit at any time by writing to your Bank or Building Society. Please also send a copy of your letter to us.

# Write to reply

## Take my money

In his Clares Report, Number 11, Dave Clare writes 'I sincerely hope that RISCOS Ltd succeed… but I will not be investing any of MY money in the company – they still require funding if anyone wants to invest a minimum of £3000… we will give every assistance we can.'

I wonder if RISCOS Ltd is going the right way about ensuring financial backing if they are only prepared to accept capital from investors who are affluent enough to cough up a minimum of £3000. It is all very well and, indeed, logical for Element 14 to invest in RISCOS Ltd (to the tune of 19.9% of available shares, I believe) but I believe the latter are missing a great opportunity to secure its future if it excludes Acorn fans who are not quite so well-off.

I believe that there are many of us, like Dave Clare, who want RISC OS to succeed in its aims. It has occurred to me that many of your readers may wish, like me, to be able to assist in supporting the company by investing in smaller amounts than £3000 but on a regular basis. Couldn't the company operate a share purchase scheme in which people can subscribe smaller amounts of money on a regular basis by Standing Order, say, £364 annually or £182 half-yearly or £91 quarterly or £30 monthly or £7 weekly?

The point is that, rather like the principle of unit trusts, capital could be acquired through many people investing small amounts of money individually which collectively add up to a very large amount.

It would seem to me that RISC OS Ltd is in a very similar position to ARM in its infancy.

If anyone is unaware of the significance of this comment then a look at the share price of ARM (or even Acorn) in the Electronic section of Stock Market published in the Financial Times or the Daily Telegraph should be highly educative!

*David H. Foss*
*foss.family@argonet.co.uk*

*Paul Middleton, RISCOS Ltd MD, replies: Unfortunately for us, the stock exchange is a lot more tightly controlled nowadays, and the Financial Services Act makes it illegal to simply advertise Shares in a new company without going through a lot of expensive procedures.*

*The rules are there to protect investors from all sorts of scams that could otherwise be used to seek investment in companies that never have any intention of trading, but were to be used solely to take money from unwitting investors.*

*As a Private Company Limited by shares as opposed to a PLC, RISCOS Ltd can only have a maximum of 50 new investors in any 12 month period. Moreover, the investors must have some reason, other than just expecting a profit from their investment, for taking up shares in RISCOS Ltd. In general this means that Investors should seek to profit by the success of other businesses that rely on the products to be produced by RISCOS Ltd.*

*It would have been nice to be able to advertise for hundreds of small investors, but legally we cannot do that.*

*If the release of RISC OS 4 is as successful as we hope, then we may be able to afford to change to a company that can be invested in by the general public, but the costs and timescales involved didn't make that an initial option.*

*Paul Middleton, RISCOS Ltd*

## An odd one

I don't know what happens, you move house, your subscription gets mixed up – next thing I know I'm not even sure if there is an Acorn Computers anymore! And to top it off, strange things have started to happen, and I don't know where to get any answers. All of a sudden I feel like an angst ridden teenager (minus the spots – well, those kind of spots anyway).

The first mystery surrounds a disc I have been using, in a perfectly normal fashion, to store text documents. It has been housed properly, handled carefully and used moderately. Why-oh-why then can it suddenly be *unformatted*, and my data *lost*!! I'm tearing my hair out – I'll be bald within a week.

Worse than this, in an effort to keep up with the Joneses, Evanses and Grifithifthsses I bought myself the HP890c GTI 16v twin turbo'd mega printer. Heaven help me ever getting a printer driver suited to it so that it prints like a GTI as opposed to a Lada Borsi special.

In the post RISC PC II RIP scenario is there any hope that the support will appear in areas like this allowing Acorns dedicated users (15 years in a darkened bedroom and proud of it) the opportunity to utilise the most modern hardware, or are we frozen in time along with ambition?

If anyone there can help with any of my problems it would make me feel less alone in computing terms. And with any luck I'll have my subscription back on track soon and can find out what on earth is going on. Keep up the good work.

*Simon Morgan*
*mathew.colin@unioncal.com*

*Um....anyone? - Ed*

## WorraCAD help

Has anyone any idea of how to get *WorraCAD* (v.1.21) working on a Risc PC 600 (RISC OS 3.5). When I try to run it I get an error message: *Fatal internal error: (SIGSEGV).* I have tried to get in touch with the original authors but have had no success. I also have a copy of *Apollonius PDT* (v.1.09) which locks up my computer at frequent, irregular intervals.

Any thoughts on this would be much appreciated, once again I have tried to get in touch with the authors but haven't been able to.

Much as I would like to buy a copy of the very impressive *ProCAD+*, I cannot really justify spending £225 (with the *Acorn User* discount) plus VAT, of my schools very limited capitation on a 'new' programme.

Any help would be much appreciated.

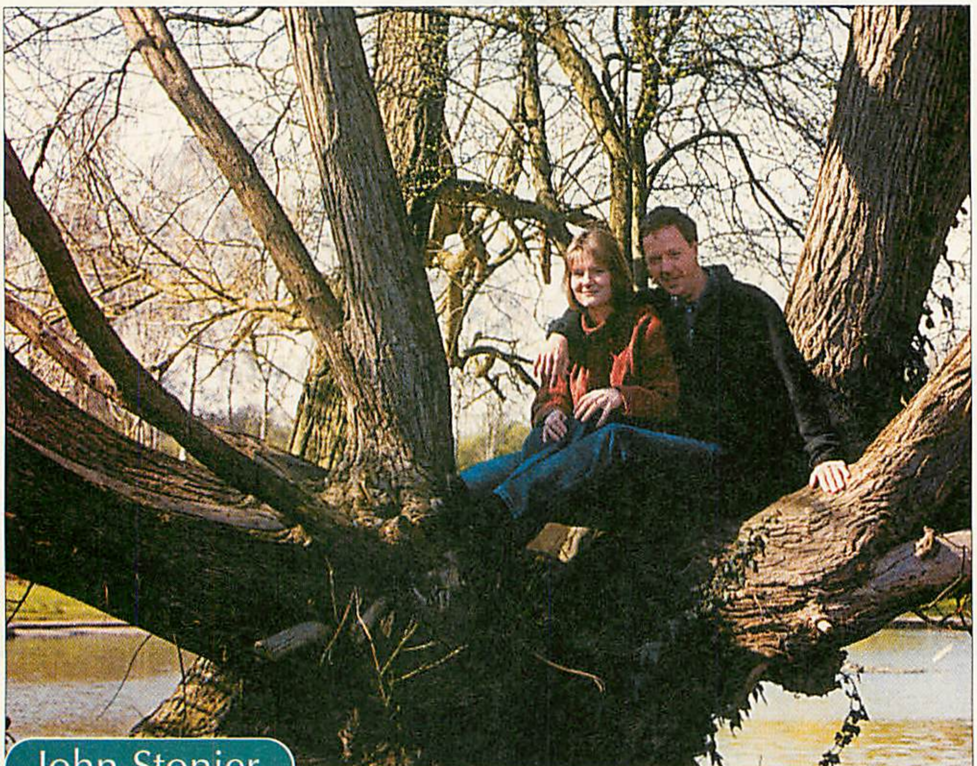
*Nick Tinker*
*priorydt@argonet.co.uk*

## New audio format

I wrote to 'Rambles in Acorn Wood' asking for a conversion of WinAMP, and lo and behold one did appear (although it's not been released yet!). The pre-release info is at: http://ocean.ucc.ie/99/oshea/acorn/soon.html

However, I've now got a new challenge – a new audio format called TwinVQ has appeared, anyone fancy trying to persuade them to do a conversion? The company in question has a site at http://www.vqf.com/

*Kato*
*axe623@novell4.bham.ac.uk*



John Stonier

It's about the first sunny day this year, and I'm in a park in Welwyn Garden City on one side of a stream. On the other side, suffering for the cause of photography, is John Stonier, perched in a tree with his fiancée Helen.

'If there's a good photo of Helen and me can you use that?' requests John. 'It would be nice; we are a partnership. What you should do is set up a Web site with a few photos from each shoot which you didn't use – now that would be interesting.'

A lot of people will remember John as the sysop of the Digital Databank BBS, but for the past two years he has been organising regional Acorn shows – his next is the Acorn South East show at St Albans in July. He's a long-time Acorn user, going back to the days of the BBC B.

'It was in 1985 when I first got involved with comms. I bought a state-of-the-art 1275 modem and was logging on to Prestel for e-mail. A lot of people think that the Internet is new and that comms is new, but it is not; it has been going for a long time.

'I used Arcade, and began to think I wanted to provide something in return for what others had provided me. I had always wanted run a bulletin board, so I got *ArcBBS*, plucked up enough courage and got two phone lines. I even took out a small ad in *Acorn User*. I managed to get in to comms purely by mistake and I really caught the bug.'

> I began to think I wanted to provide something in return for what others had provided me.

It was a good thing that John was into comms because it was through the Internet on a Christian singles Web site that he met Helen. 'It was quite funny,' interjects Helen. 'I had just got e-mail and was looking for people to e-mail me. We got on so well that the first time John phoned me the call lasted two hours.' John is working on getting Helen involved in Acorn shows.

'The last show was OK,' admits Helen 'because I found something to do. In the same venue as the show was a Conservative women's conference but there were no signposts, so I had to direct people and guess who was there for which event at the same time.'

By 1996 John faced an awkward decision. The BBS was becoming a hard slog, and less rewarding. Although he'd initially had to get more phone lines, he was now seeing numbers drop off as the Internet became more popular. What was he going to do to support the Acorn community in the future if he closed the BBS?

'The ARM Club used to organise one-day shows. I was a representative of Welwyn and Hatfield Computer Club and we, as a group, used have our own little stand. I got involved in the ARM Club committee and with Ralph who did the shows, but who didn't really have time to organise them.

'My first show was in July 1997 at Welwyn Garden City. It was hard work convincing companies to take part, but they did and it was full up. On the day people were pouring in through the door. Straight away I knew it was a success. It gave me a real buzz being able to turn up at a show that I had organised and see the Acorn community, which I try to support as much as possible, getting something out of it. I thought this is *it*, the new area I want to move into: organising Acorn shows.'

Show organising is now always on John's mind. Even at the Ideal Home Exhibition this year he was more interested in how the show was run than the exhibitors. He'd like to organise shows for a living but there is not quite the market for it in Acorn community. He'd also have to give up his day job as a landscape gardener. He's enthusiastic about both, probably because his job and his 'hobby' are so different.

'When you turn up for a show you do not know if any one else will turn up, and believe me it does lead to a lot of pressures beforehand. Then there are always problems – I think what gets me through at the end of the day is my own strong faith in God. That is a real encouragement to me. I always believe that it is God who has entrusted me with these opportunities so I have always given 100 per cent. My drive has been my faith.'

John still has to put on one of his biggest shows of his life, his wedding: 'It would be a lot easier if it were a cyber-wedding'.

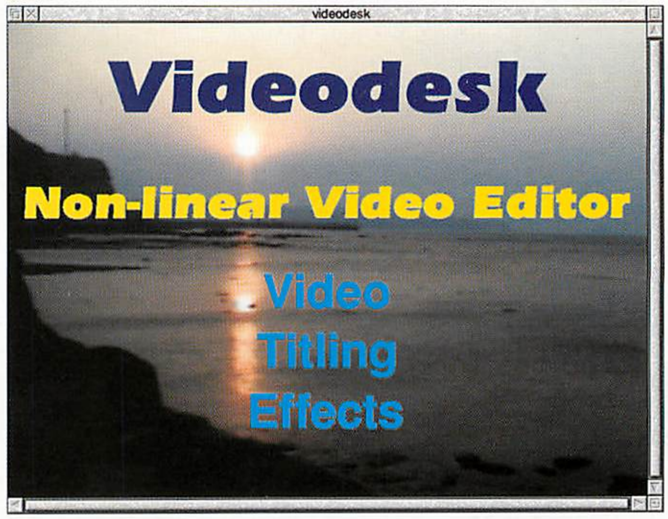
**Jill Regan**

# Videodesk

**Videodesk** is a powerful non-linear video editing system. It allows full-size, full-colour and full-motion video to be edited to frame accuracy, and effects and titles added. The finished material can then be output back to video for recording or display.

**Key Features:**

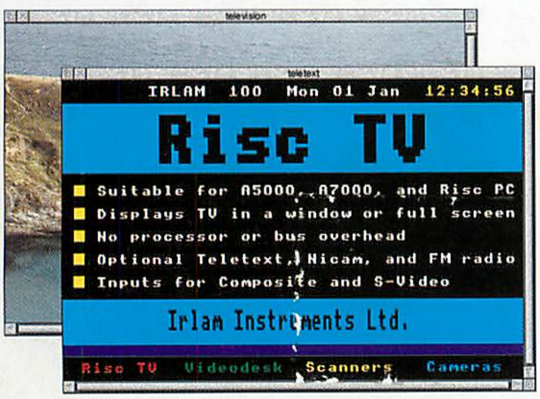
- Composite and S-Video inputs and outputs.
- 50 fields per second capture and playback.
- 24 bit colour range.
- Resolution of up to 768 pixels x 576 lines.
- High-quality uncompressed still grabs.
- VITC Timecode input and output.
- 16 bit stereo audio inputs and outputs.
- Audio sampling at up to CD and DAT rates.
- Multiple audio tracks (polyphonic).
- Instant playback of edits.
- High performance Replay movie capture.
- Multi-level undo and redo.
- Edit Decision List (EDL) generation.




Sophisticated video editing software is supplied as standard, which is flexible and simple-to-use. Editing is performed on a multi-track time-line with separate audio and video tracks.

Video effects are generated digitally and include over 100 dissolves, wipes, fades and slides. Comprehensive titling software uses the RISC OS outline font system, and titles can be made to scroll, flash, fade and be overlayed onto the video.

# Risc TV




**Risc TV** is a unique multimedia digitiser complete with built-in television tuner and audio processor, which allows you to watch television on the desktop and digitise high quality still images from the tuner or an external video source.

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